MIDWEST MARKETING ISSUE
Pages 9-16

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If Benson Quits, Who Will Become New Secretary?

Successor Not Chosen As Political Wolf Pack Howls Against Benson

By JOHN CIPPERLY
Croplife Washington Correspondent

The wolf pack of the daily press is now in full cry to drag Ezra Taft Benson, secretary of agriculture, out of his cabinet post. The possibility that Mr. Benson might be coming to the end of the road as a cabinet officer was raised in Croplife for Oct. 21, page 1, in an analysis of the farm political problem. There can be no doubt that the GOP farm politicians want Mr. Benson replaced, whereas the Democratic opposition wants him retained because of his alleged value in antagonizing the farm vote.

Firing Mr. Benson seems like a simple move which will win friends and influence farmers in the corn belt and Great Plains states. But this simple answer presupposes that the administration has a replacement candidate and also that the administration wants to win the 1958 congressional campaign.

This foregoing paragraph sounds like a contradiction since it would be expected that all politicians wish to win elections. But since politicians are not enamoured of the obvious, this seeming contradiction requires deeper analysis of the long range strategy of the administration in office.

Naturally it would wish to win the 1958 congressional campaign, at least through a showing of holding its own in the House and Senate. The administration is particularly vulnerable in the farm areas of the Midwest where the plight of the farm communities is

(Continued on page 8)

Two Cooperatives May Combine in Wisconsin

MINNEAPOLIS, MINN.—Two midwestern cooperatives are studying the possibility of combining forces, according to a joint announcement by Curtis Hatch, Madison, Wis., president of Wisconsin Farmco Service Co-op, and J. F. Shea, Pickett, Wis., president of Midland Cooperatives, Inc., Minneapolis.

Farmco has 52 member cooperatives with 132 retail outlets in Wisconsin. Midland has 173 member cooperatives in Wisconsin and also serves other member cooperatives in Iowa, Minnesota, and North and South Dakota.

Both Midland and Farmco are stockholders in Central Farmers Fertilizer Co., a cooperative which is building a phosphate fertilizer plant in Idaho.

Central Farmers also is part owner in a nitrogen fertilizer plant at Lawrence, Kansas, and takes the entire

(Continued on page 17)

UNIFICATION MOVE . . .

Middle West Group Votes to Join NPFI In Broad Program

CHICAGO GROUP VOTES

CHICAGO—In a historic annual meeting held Oct. 31, members of the Middle West Soil Improvement Committee voted to join the National Plant Food Institute in the latter's comprehensive program of developing the fertilizer market potential. The decision of the MWSIC was accepted on Nov. 1 by the Institute at its meeting in Atlanta. (See separate story, this page.)

Presiding at the Chicago meeting at the Sherman Hotel, was Richard

(Continued on page 17)

INSTITUTE BOARD ACCEPTS

WASHINGTON—A plan under which the activities of the Middle West Soil Improvement Committee of Chicago will be merged into the program of the National Plant Food Institute was approved on Nov. 1 by the Institute's board of directors, meeting at Atlanta, Ga.

John A. Miller, president of the Institute, in announcing the board's action said that "the Middle West Soil Improvement Committee, of which Zenas H. Beers is executive secretary, will serve as the Midwest regional office of the Institute, with headquarters in Chicago, effective Jan. 1, 1958." His statement was made following the favorable vote of the MWSIC to combine its activities with those of the Institute at the Chicago meeting the previous day. (Details in separate story.)

Mr. Miller explained that the Midwest regional office will be one of four regional offices established under the Institute's expanded program in the field of research and education.

"We are pleased that Mr. Beers will be the Midwest regional director of the Institute, for his broad knowledge and effective work in research and education in the thirteen Midwestern states will be great assets in our nationwide effort to focus increased attention on the importance of soil fertility in agricultural programming," Mr. Miller said.

"It is the intention of the Institute to carry on the good work previously conducted by the Middle West Soil Improvement Committee and, in addition, the Institute expects to expand the Midwestern program through greater financial support," Mr. Miller said. "Among the many activities that will be conducted will be the annual meeting with Midwestern agronomists."

The Midwest regional office of the Institute will cover the follow-

(Continued on page 17)

AT SOUTHEAST CONFERENCE . . .

Presents Seven Point Plan To Boost Use of Fertilizer

By DONALD NETH
Croplife Managing Editor

ATLANTA—A seven-point program designed to boost fertilizer use in the South by 7.8 million tons in ten years was unfolded by Dr. Russell Coleman, executive vice president, National Plant Food Institute, at the second annual Southeastern Fertilizer Conference here Oct. 31.

About 200 persons attended the session, held at the Dinkler-Plaza Hotel in conjunction with the second annual Southern Soil Fertility Conference.

Dr. Coleman said the tonnage target for the program is based on a "realistic potential for fertilizer usage in the South," and the suggested means of executing the program had been developed from a survey of factors influencing fertilizer use

This survey has been conducted by National Analysts, Inc. for the Institute, and thus far only portions of it have been ready for release. Some of the aspects of the survey that concern Northeast states were presented at the New England Fertilizer Conference (see Croplife, Oct. 7, page 1), and preliminary findings for western states were given at the Pacific Northwest Plant Food Assn. meeting. (Croplife, Oct. 14, page 1.) At this Southeast meeting Dr. Coleman told of some of the findings in the southern states, declaring that the study suggests that the Institute's southern program should concentrate on the following seven points:

1. Support soil testing programs in

(Continued on page 20)

Industry Given Until Dec. 31 to Submit Views on Proposed Pesticide Label Rule

WASHINGTON—That the pesticide industry will have until Dec. 31 to submit its views on a proposed amendment to regulations for labeling various pesticides, was announced by the U.S. Department of Agriculture last week.

The amendment, proposed on Sept. 11, would prohibit statements in the labeling of economic poisons that would directly or indirectly imply recommendation or endorsement of the products or their ingredients by any federal agency.

The USDA announcement said: "Certain members of the pesticide industry asked USDA's agricultural research service to extend the 30-day period originally specified for submission of views on the proposed regulation, so that persons affected may give further consideration to the effects of the proposal.

"Federal regulations already state that an economic poison or device will be considered misbranded if its label implies that the commercial product is recommended or endorsed by any agency of the Federal Government. However, statements have appeared on pesticide labels claiming that their formulas or active ingredients are recommended by USDA. Such statements tend to imply that the product itself is USDA-endorsed. It is to avoid such misunderstanding on the part of the public that the new amendment is proposed.

"A notice scheduled for publication in the Nov. 8 Federal Register gives interested persons until Dec. 31 to submit written views, data, or arguments on the proposed amendment to the regulations for the enforcement of the federal insecticide, fungicide, and rodenticide act. They may be sent to plant pest control division, agricultural research service, USDA, Washington 25, D.C."

Inside You'll Find

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Midwest Rural Business Outlook Called Bright

ST. PAUL, MINN.—Upper Midwest dealers look for a good selling year ahead. They see sales to farm families to be "as good or better" than this year. This report comes from the fourth annual business poll completed recently by The Farmer, a magazine published here.

Eight of every 10 major dealers from throughout Minnesota, North and South Dakota expect their 1958 business to improve or at least hold steady with the selling year now drawing to a close.

A total of 11,574 survey questionnaires were mailed to every hardware, lumber, furniture, appliance, automobile, truck and implement dealer in Minnesota, North and South Dakota outside of the Minneapolis, St. Paul and Duluth areas. Dealers were asked to compare prospective sales for next year against actual sales in 1957.

A third of the dealers—3,911 of 11,574—responded to the survey within one week. Here's how dealers in each classification size up 1958 sales prospects: 85.1% of hardware dealers felt that 1958 sales would be as good or better; lumber 84.8%; furniture 88.9%; appliance 83.8%; automobile 83.8%; motor truck 86.3%; and implement 76.6%.

The dealers based their 1958 predictions upon another good feed crop and an improved livestock situation, and farm income running above this year.

The survey also shows Minnesota, North and South Dakota dealers outside of Minneapolis, St. Paul and Duluth secure from 53.5% to 72.7% of their sales volume from farm people.

Nitrogen Conference Scheduled for February

ST. PAUL, MINN.—Importance of nitrogen fertilizers in Midwestern agriculture will be cited during a nitrogen conference Feb. 20-22 at the Lowry Hotel in St. Paul.

Attending the conference will be representatives of the fertilizer industry and soils research men and extension specialists from the University of Minnesota.

The event will feature fertilizer research, role of nitrogen in crop production, soil nitrogen needs and relationship between nitrogen and other plant nutrients in maintaining soil fertility. There will also be a tour of the St. Paul Ammonia Products nitrogen production plant south of the Twin Cities.

The conference is sponsored jointly by the Minnesota fertilizer industry committee of the Midwest Soil Improvement Committee and the University.

Ivor R. Burden

HEADS WESTERN GROUP—Recently elected president of the Western Agricultural Chemicals Assn. is Ivor R. Burden, executive vice president of United-Heckathorn, Richmond, Cal. Mr. Burden succeeds A. F. Kirkpatrick, American Cyanamid Co., as head of the WACA. The Association's meeting was held at San Mateo, Cal., Oct. 7-8. (Croplife, Oct. 21, page 20.)

Texas Gulf Sulphur Co. Reports Lower Income

NEW YORK—Net income of Texas Gulf Sulphur Co., Inc. for the nine months ended Sept. 30, 1957 was $13,762,343, or $1.37 a share, on the 10,020,000 shares in the hands of stockholders, the company reported to shareholders Oct. 28. Gross revenue from sales amounted to $52,404,620.

In the same period of 1956, net income was $21,780,567, or $2.17 a share on the same number of shares, while gross revenue from sales amounted to $65,361,785.

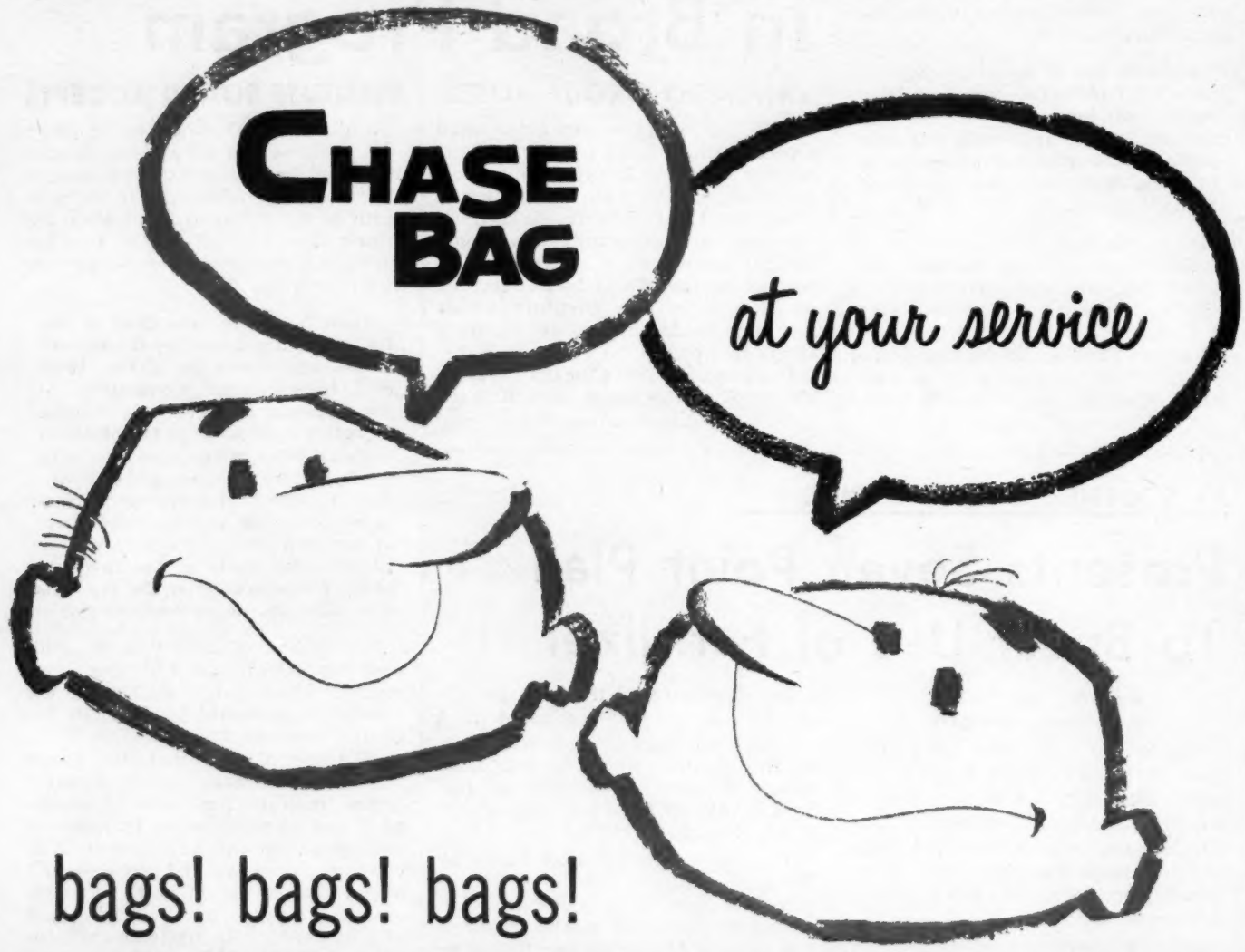
During September, the company stated, two non-recurring items reduced earnings by about 27 cents a share. Of these items, approximately 16 cents involved the writing-off of all unamortized drilling costs, geophysical expenses and the unamortized portion of lease costs in connection with offshore sulphur leases in the Gulf of Mexico, and approximately 11 cents involved the price adjustment of customer inventories following the recent reduction in the price of sulphur.

Fertilizer Sales Down In Alabama Tally

MONTGOMERY, ALA.—A total of 986,855.24 tons of fertilizer was sold in Alabama for the fiscal year 1956-57, which ended Sept. 30, the state department of agriculture has reported. This figure is down from the 1,051,358.19 tons sold in the state during the previous fiscal year, according to A. W. Todd, commissioner of agriculture.

Of the 22 grades listed, a 4-10-6 was most popular. It was consumed in the amount of 310,885.72 tons. However, the year before, it registered a consumption of 413,756.28 tons. The next best seller was 4-12-12 of which 193,158.85 tons were sold this year, a considerable gain over the 128,315.56 tons consumed the year before. An 0-14-14 grade was third, with a consumption of 88,442.28 tons in the 1956-57 year, as compared to 52,149.34 tons the previous year.

Of significance is the report for September consumption of grades where 0-14-14 was sold in the amount of 20,268.50 tons in that month of 1957, as compared to 7,612.66 during the same month of 1956. The grade 0-20-20 jumped from 396.35 tons in September, 1956, to 1,165.58 tons in that month this year.



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otash Deliveries p 5% in Nine Month Report

WASHINGTON—Deliveries of po-sh for agricultural purposes in the ited States, Canada, Cuba, Puerto co, and Hawaii by the eight prin-al American producers and also importers, totaled 2,576,304 tons salts containing an equivalent of 20,440 tons K_2O during the first ne months of 1957, according to the erican Potash Institute. This was increase of over 5% in salts and O over the same period in 1956.

Continental United States took 1,-6,424 tons K_2O, Canada, 49,516 tons, ba, 10,185 tons, Puerto Rico, 14,600 ns, and Hawaii, 19,715 tons K_2O. ese figures include imports of 79,-1 tons K_2O for only the first five nths of the year. Exports to other untries were 184,251 tons K_2O, an crease of 71%. Deliveries of potash r non-agricultural purposes amount-to 91,742 tons K_2O, a decrease of % under last year. Total deliveries r all purposes were 3,035,414 tons salts containing an equivalent of 796,433 tons K_2O, an increase of % in salts and K_2O.

During the third quarter of 1957, eliveries for agricultural purposes ere 315,191 tons K_2O in Conti-ental United States, 9,228 tons in anada, 1,330 tons in Cuba, 304 ons in Puerto Rico, and 7,275 tons n Hawaii making a total of 333,328 ons K_2O, an increase of nearly 2% ver last year. (Import figures are ot available at this time for the hird quarter of the calendar year.) Exports of potash to other coun-ries during the third quarter were 0,799 tons K_2O, an increase of 70 tons over last year.

Deliveries of potash for non-agri-ltural purposes were 30,644 tons O, an increase of nearly 9% over st year. Total deliveries for the ird quarter were 698,047 tons of lts containing an equivalent of 414,-9 tons K_2O, an increase of over 2% er last year.

elsicol Appoints New irector of Research

CHICAGO—Dr. William P. Uter-ohlen, Jr., has been appointed di-ctor of research of Velsicol Chem-l Corp., the firm has announced. r. Utermohlen obtained his B.A. de-ee in 1936 from the University of nsas with a major in chemistry, d his Ph.D. in organic chemistry m the University of Nebraska in 40.

Since that time Dr. Utermohlen s been engaged in research work r the Tennessee Eastman Co., the stitute of Textile Technology, and e Permutit Co., whom he served as ief research chemist. Prior to join-g Velsicol, Dr. Utermohlen was as-tant research director of the Toni vision of the Gillette Company.

At Velsicol, Dr. Utermohlen will responsible for all fundamental d applied research in agricultural, emicals, polymers, organic process-resin applications and other fields new interest. The division which he ads will work closely with the new oducts and process development vision of the research and develop-ent department. Headquarters are Chicago.

rtilizer Tests Best r Years in Kansas

MANHATTAN, KANSAS—Results 1957 Kansas agricultural experi-ent station corn fertilizer tests are general the best since 1950, accord-g to Floyd Smith, agronomist at nsas State College, Manhattan. The 57 tests, which measured response nitrogen, potash, and phosphorus e now being harvested.

Numerous experiments with nitro-gen were conducted in alluvial soils along the Kansas, Missouri, and Republican river valleys. While only part of these trials have been harvested, some have shown yield increases of 30 to 40 bushels an acre. It appears that this response is due to nitrogen.

There was little response to potash, except at one location near Olathe where an increase of approximately five bushels an acre was obtained.

Some response from phosphorus was received at test plots at Columbus, Manhattan, Everest, and Holton. As much as 10 bu. an acre response has been noted for starter fertilizers (phosphorus effect) in 1957. Mr. Smith said it appears that water solubility of phosphorus is not necessarily related to degree of response.

Results of fertilizer trials with corn will be reported at the annual fall fertilizer conference, to be held at Kansas State College Dec. 9-10.

Miller Chemical Announces Three New Appointments

BALTIMORE, MD.—Miller Chemical & Fertilizer Corp. has announced a number of personnel changes in its organization. These included the appointments of Frank R. McFarland, as technical sales director; Lou F. Fries as sales manager of the home garden division; and Ross E. Holtz as sales manager of the export division.

Mr. McFarland will direct technical development and service in all phases of agricultural chemical sales, including fertilizer, pesticides and miscellaneous products. He has been with Miller since 1954 as agriculturist and assistant sales manager. Prior to that time, he was associate county agent of Baltimore County, Maryland.

Mr. Fries, formerly sales representative, has been appointed sales manager of home garden products, which includes a complete line of pesticides and fertilizers packaged for home use.

Mr. Holtz, who has been with the company for five years as sales representative and office manager, will manage Miller's export sales in all parts of the world.

New Firm Delivers Gypsum in Arizona

PHOENIX, ARIZ. — Shipments of gypsum began recently from Verde Gypsum, a new corporation in Arizona. The mineral used to neutralize alkaline soils, will be mined from a $250,000 development east of Camp Verde, Ariz. An area of 1,920 acres with gypsum to a depth of 200 feet would supply the needs of Arizona agriculture for nearly 300 years, according to J. R. Scott, sales manager.

The deposit was staked out many years ago, but until a new highway was constructed near the site recently, trucking was not economically feasible. The Verde firm was incorporated in Arizona in June, 1957.

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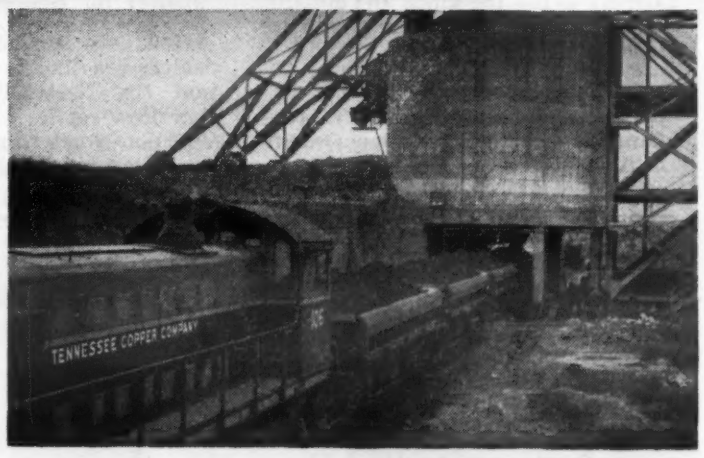

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Reports Made on Season's Experiments at Meeting of Southern Soil Fertility Group

By HENRY S. FRENCH
Croplife Staff

ATLANTA — Results of agronomy research work, an optimistic view on the American farm market and a look at the lively Georgia Soil Fertility Program were presented at the second annual Southern Soil Fertility Conference, held at the Dinkler-Plaza Hotel here Nov. 1.

The conference, sponsored by the Southern Soil Research Committee and the National Plant Food Institute, had a well-paced program, which was highlighted by reports of work on sulfur and trace elements and which was anchored by a summary of how the research and extension specialists have fused together an action program to boost soil fertility in Georgia.

The optimistic look at the farm market came in a movie, "The Bright Promise of the American Farm Market," produced by Fortune magazine. The movie, introduced by Louis H. Wilson, secretary and director of information of the Institute, emphasized that the growing efficiency and improved management on U.S. farms point to a bright future for industries serving agriculture.

Dr. Dale A. Hinkle, head of the department of agronomy at the University of Arkansas, presided at the session. He asked the fertilizer industry to lend its support in channeling more young people into agricultural training, pointing out that for 15,000 jobs available to agricultural graduates each year the land grant colleges are turning out only 8,000.

Dr. Eric Winters, associate director, Agricultural Experiment Station, University of Tennessee, opened the session with a description of the work of the Southern Soil Research Committee.

Speaking for the National Plant Food Institute, Harold Epting, Epting Distributing Co., Leesville, S.C., described plans for expanding the Institute's program. These plans call for opening of a Southeast regional office in Atlanta Jan. 1. The purpose of the expanded program is simply to get farmers to use the kinds and amounts of fertilizer recommended by the colleges, Mr. Epting said.

Progress reports on sulfur studies were presented by H. V. Jordan, soil scientist, U.S. Department of Agriculture and Mississippi State College; Dr. L. E. Ensminger, professor of soils at Alabama Polytechnic Institute, and J. A. Lutz, assistant professor of agronomy at Virginia Polytechnic Institute.

Mr. Jordan said that of 12 sulfur tests on cotton, six had shown response and the yield increase for those six averaged 260 lb. an acre. Five of 12 trials on clover and grass showed response with an average yield boost of 396 lb. for clover grass combinations and 504 lb. dry clover. In 1956 one trial on tobacco showed a yield increase from sulfur of 261 lb. leaf tobacco an acre. Two sulfur experiments with corn, one with soybeans and one with cabbages and turnips have shown no response thus far, Mr. Jordan said.

Dr. Ensminger said that test results show that sulfur is an important factor in crop production in Alabama. With the trend toward fertilizer with little or no sulfur, a planned sulfur program is needed, he said.

Dr. J. W. Fitts, head of the department of soils at North Carolina State College, presented the research committee's grade-ratio report. He listed changes in grades for 1957 compared to 1956 which ranged from no changes in several of the southern states to 87 new grades in Florida.

He reported on the following questions which were included in a survey of grade-ratio developments in 12 southern states:

In published recommendations or in the fertilizer grade list, are you including the ratio of fertilizer in addition to the grade? Example: recommendations for corn at planting—20 lb. N, 40 lb. P_2O_5, 40 lb. K_2O—ratio 1-2-2—suggested grade 5-10-10 or higher multiple. This drew a "yes" answer from Virginia, North Carolina, South Carolina, Florida, Alabama, Louisiana, Texas, Oklahoma and Arkansas; a "no" from Kentucky and Tennessee; no recorded answer for Georgia.

Is the trend toward recommending pounds of N-P_2O_5-K_2O with possibly a suggested grade continuing in your state? This drew a "yes" in all states except for a "no trend" answer for Georgia.

How are farmers and fertilizer dealers reacting to this recommendation (lb. N-P_2O_5-K_2O)? This question drew replies of "favorable" from Virginia, North Carolina, South Carolina, Florida, Oklahoma and Tennessee. Alabama had "no comment," Louisiana said "some for, some against," Texas said "extremely well," Arkansas said "slowly being accepted," Kentucky said "accepted," and Georgia was not recorded.

Dr. J. G. Fiskell, associate professor of soils, University of Florida, reported on activity of the Southern Soil Research Committee's work group on trace elements.

In leading off the presentation of the Georgia Soil Fertility Program, Dr. Glenn W. Burton, chairman of the agronomy division, University of Georgia, discussed the organization of the university's College of Agriculture and told of some of the general problems facing the soils specialists. Dr. H. F. Perkins, assistant agronomist, told of some of the research results, which are forming the foundation for the soils fertility program.

Dr. P. J. Bergeaux, extension agronomist, then outlined the work of extension. He said that some of the tools used to encourage farmers to adopt research results were the grazing system and feeding program contest, 100 bushel corn club, five acre cotton contest, bale and a half cotton club and a large number of demonstrations, other contests, short courses and meetings.

Ralph Wehunt, extension agronomist, said that the Georgia specialists work as a team and promote all good farming practices. He said that putting the soil fertility program into action involved a lot of people and without widespread support the program could never succeed.

He listed as one of the goals of the program the use of 8 million tons of lime annually to get the soil up to the proper level, then 2 million tons annually to maintain it. Current lime use in the state is 300,000 tons annually. Another goal is to boost mixed fertilizer use from the present 1.2 million tons to 1.8 million tons in ten years.

Mr. Wehunt said that 35% of farmers in the state are using fertilizer not recommended by the college.

As two examples of action programs now being carried out, he mentioned the $200 million farm fertility program and the intensified soil fertility program. The latter is being conducted on a trial basis in six counties, with the active support of a committee from the Georgia Plant Food Educational Society. (See Oct. 7, Croplife, pages 9 and 18.)

J. W. Fanning, head of the department of agricultural economics at the University of Georgia, told the group that between 1955 and 1956, despite an increase in yields and in farm commodity sales, farmers' net incomes in Georgia declined. This was due, he said, to a rise in production expenses.

He said that in 1956 in Georgia fertilizer input "was not a heavy item of expense in relation to other expenses." It was between 12% and 13% of all production expenses and less than 10% of cash receipts.

"Neither is out of line, but I would hesitate to say that by merely increasing the use of fertilizer in 1958 farmers would increase their net income," Mr. Fanning said. "And the reason I wouldn't say it is that there are more factors at work than fertilizer affecting farm profits.

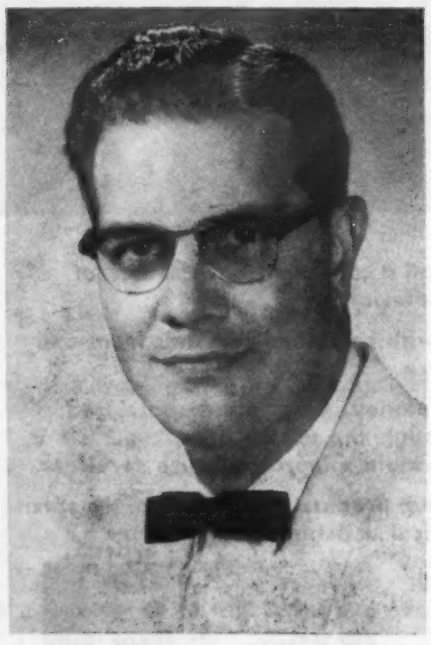
"We might study fertilizer carefully and as well as we can in the setting of these other factors and in relationship to them. This is the responsibility of the economist, and he does not do it to reduce the use of fertilizer but to help farmers understand how fertilizer can be used more profitably—and under what conditions it will pay him to increase the amount of fertilizer he uses."

In listing some of the factors affecting farm profits, Mr. Fanning said that price forecasting "is tremendously important in recommending fertilizer to farmers. At present beef cattle prices are looking up, and well fertilized high quality pasture grasses will pay greater profits. But hogs don't look too well. As a matter of fact, the outlook is for some very low prices in the late fall of 1958 and winter of 1959. Here's a caution sign if you are depending on hogs to use all of your feed."

Dealers Attend Sessions In Pacific Northwest

PORTLAND, ORE.—Sixty-two dealers attended the annual Fertilizer Dealers' Day at Moses Lake, Wash., Oct. 30, and on the following day, 60 were in attendance at Prosser, Wash. These meetings, jointly sponsored by the Pacific Northwest Plant Food Association and Washington State College, listened to a program which included explanation of soil testing by the college, developments in fertilizer requirements of Washington field crops under irrigation, financing by banks of an adequate fertilizing program, and potential supplies and potential markets for fertilizer this coming season.

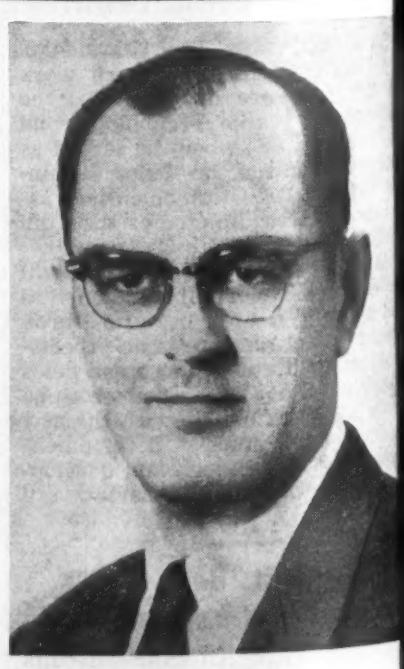
Dealers' Day programs are a part of the program of the Pacific Northwest Plant Food Association in Oregon, Washington and Idaho. Next Dealers' Day program will be held at Oregon State College on Jan. 22.



Dr. R. L. Beacher

Dr. Samuel L. Tisdale

Dr. Richard B. Bahme



Zenas H. Beers

KEY MEN IN NPFI PROGRAM—Named by the National Plant Food Institute as key personnel in its new educational and promotion program are the men shown above. The appointments of Doctors R. L. Beacher, Samuel L. Tisdale, and Richard B. Bahme were reported in Croplife last week (Nov. 4, page 1). That of Dr. W. H. Garman as regional director for the Northeastern states was reported in Croplife's issue of Sept. 30, page 1. Dr. Beacher, agronomist from the University of Arkansas, will be southwestern regional director with headquarters at Fayetteville, Ark.; Dr. Tisdale, University of North Carolina, southeastern regional director with offices at Atlanta; Dr. Bahme, Berkeley, Cal., will be a representative for Arizona and California with offices at San Francisco; and Mr. Beers, executive secretary of the Middle West Soil Improvement Committee, will be midwestern director with headquarters in Chicago as outlined in story beginning on page 1 of this issue of Croplife.

Howard L. Sanders

oward L. Sanders New resident of Canadian ertilizer Company

NEW YORK—Howard L. Sanders, ce president and treasurer of Com- ercial Solvents Corp., has been med president of Northwest Nitro- emicals, Ltd., the Canadian agri- ltural chemicals affiliate of CSC, lo- ted at Medicine Hat, Alberta. The nouncement was made by J. Albert oods, president of Commercial Sol- nts and chairman of Northwest tro-Chemicals' board, following a eeting of that group.

Mr. Sanders succeeds Thomas L. rook, who has resigned to resume ull time duties as chairman of the oard of the New British Domi- ion Oil Co. of Calgary, Alberta.

Among Mr. Sanders' responsibilities his new capacity will be the su- rvision of Northwest Nitro-Chemi- ls' new $22 million plant at Medi- ne Hat, which produces a broad nge of high analysis nitrogen and osphate fertilizer formulations for e throughout the prairie provinces Canada and the northwestern nited States. The marketing of rthwest Nitro-Chemicals products handled by Harrisons and Crosfield, d., of Toronto.

Northwest Nitro-Chemicals was rmed in 1955 and began operations year ago. Since that time, Mr. nders said, it has expanded its line products to include a variety of rmulations developed especially to eet the needs of farmers in its mar- ting area. The company is operated der a long term management con- act with Commercial Solvents Corp.

Mr. Sanders began his career with mmercial Solvents in 1933 when at company absorbed the Rossville mmercial Alcohol Co. of which he s assistant treasurer. Since that me, Mr. Sanders has held a series increasingly responsible positions CSC, including periods as assistant ntroller, treasurer, and most recent- vice president. Much of his respon- bility at CSC has related to affi- ted and subsidiary enterprises.

eorgia Votes Funds Battle Fire Ant

ATLANTA—An allocation of $75,- 0 has been made by Gov. Marvin ffin to battle fire ant infestations 32 Georgia counties.

The state funds will be matched federal money in an all-out effort halt the invasion of the fire ants hich are threatening an estimated ,000 acres, with the heaviest in re- rted Decatur, Crisp and Muscogee unties.

The allocation was made to "halt e invasion of the fire ants before ey infest Georgia to the extent they ve Alabama, Mississippi and Louisi- a," the governor stated.

American Society of Agronomy Observes 50th Birthday at November Convention

ATLANTA, GA. — Ezra Taft Benson, Secretary of Agriculture, will deliver the principal address at the jubilee program during the 50th anniversary meeting of the American Society of Agronomy, Nov. 19, at Atlanta, Ga. "New Frontiers in Agriculture" is the Secretary's topic.

More than 400 scientific papers, including commemorative addresses, will be presented during the 4-day meeting Nov. 18-22 at the Atlanta Biltmore Hotel. In addition, the sessions will include special business meetings, divisional election of officers, annual committee reports, panel discussions, and meetings of associated groups.

Other speakers at the jubilee session Nov. 19 are Dr. Richard Bradfield, Cornell University, soil scientist and president of the International Society of Soil Science, who will speak on "The Agronomist's Accomplishments and Opportunities for Future Contributions in the International Field," and H. F. DeGraff, Cornell University biochemist, whose topic is "The Agronomist's Accomplishments and Opportunities for Future Contributions in the United States."

H. H. Laude, Kansas State College, will present a history of the Society.

A. G. Norman, University of Michigan, will preside at the general business meeting Tuesday evening, Nov. 19, and at the annual banquet, Wednesday evening, Nov. 20, when Society fellowships, outstanding achievement awards, student awards, and new officers will be announced.

The Soil Science Society of America will hold its annual meeting Monday evening, Nov. 18, with Dr. John B. Peterson, head of the Purdue University agronomy department, and Dr. Sterling B. Hendricks, U.S. Department of Agriculture research scientist, as jubilee speakers. L. B. Nelson, U.S. Department of Agriculture soil scientist, is president of the Society.

Progress in crop breeding and crop production will be reviewed by H. K. Hayes, University of Minnesota, and H. D. Hughes, Iowa State College, at the general meeting of the Crop Science Society of America, Monday evening, Nov. 18. H. H. Kramer, Purdue University, is president of this group which was formally organized in 1955. The Society comprises the six divisions of the American Society of Agronomy devoted to crop science.

QUARTERLY DIVIDEND

MIDLAND, MICH.—The board of directors of The Dow Chemical Company has declared a dividend of 30¢ a share on its common stock payable Jan. 15, 1958, to stockholders of record at the close of business on Dec. 17, 1957.

79%

of Successful Farming farm families

own their farms

The owner takes pride in proprietorship, respects profit potentials, maintains land for full productivity, is a prime prospect. And among SUCCESSFUL FARMING *farm subscribers, almost four-fifths are owners of all or part of their farm.*

Big businessmen in the big industry of agriculture, SF farmers have higher capital investment, greater technical knowledge, utilize more machinery and equipment, and take the best care of their farm land with commercial fertilizer.

SUCCESSFUL FARMING's over 1,300,000 circulation concentrates among the most successful of the nation's farmers—the 44% of US farmers earning 91% of total cash farm income.

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MEREDITH PUBLISHING COMPANY, Des Moines...
with offices in New York, Chicago, Detroit, Philadelphia, Cleveland, Atlanta, San Francisco, and Los Angeles.

Industry Patents and Trademarks

2,811,432

Herbicidal Composition. Patent issued Oct. 29, 1957, to Harold E. Bruner, Akron, Ohio, assignor to Monsanto Chemical Co., St. Louis, Mo. An essentially dry herbicidal composition comprising a mixture of sodium pentachlorophenate as the essential active ingredient and a sodium lower alkyl xanthate herbicide in proportion sufficient to reduce irritation to skin and mucous membranes of persons exposed to the dry composition.

2,811,478

Methods for Repelling Rodents with an Alkyl 2-Furoate Tetrachloride. Patent issued Oct. 29, 1957, to Manlio A. Manzelli, Bon Air, and Virgil H. Young, Jr., and Charles L. Harowitz, Richmond, Va., assignors to Virginia-Carolina Chemical Corp., Richmond. Process of protecting materials which are susceptible to attack by rodents which comprises associating therewith an alkyl 2-furoate tetrachloride in which the alkyl group contains from 1 to 18 carbon atoms.

2,811,479

Insecticidal Bait Composition. Patent issued Oct. 29, 1957, to Robert J. Geary, Blue Point, N.Y. An insecticidal particulate composition consisting of, by weight, about 33 parts of blackstrap molasses, 20 parts of anhydrous calcium sulfate, one part of O,O-dimethyl dithiophosphate of diethyl mercaptosuccinate, and 46 parts of powdered attapulgite.

2,811,553

Process for the Manufacture of Urea. Patent issued Oct. 29, 1957, to Jonas Kamlet, New York, assignor to Commercial Solvents Corp., Terre Haute, Ind. 1. Cyclic process for the manufacture of urea which comprises the steps of: (a) absorbing ammonia and carbon dioxide in the proportions of two moles of the former to one mole to the latter, in a reaction medium comprising at least one member of the group of hydrocarbons which form azeotropes with water, said absorption being effected at a temperature below the dissociation temperature of ammonium carbamate at the ambient pressure; (b) reacting the resultant mixture of ammonium carbamate at a temperature between 130° C. and 210° C. and at superatmospheric pressures to effect partial conversion of the ammonium carbamate to urea and water; (c) discharging the reaction mixture into a pressure from subatmospheric to superatmospheric at a temperature between the dissociation temperature of ammonium carbamate and the boiling point of the hydrocarbon-water azeotrope at the ambient pressure, and flashing off the unreacted carbon dioxide and ammon from the condensate of urea, hydr carbon and water; (d) distilling th hydrocarbon-water azeotrope fro the condensate to leave a substant ally anhydrous urea; and (e) retur ing the unseparated mixture of am monia and carbon dioxide from ste (c) to step (a) of the process fo reconversion to ammonium carbona in the hydrocarbon medium.

2. The process of claim 1 where th reaction medium comprises at lea one member of the group of hydr carbons consisting of benzene, cycl hexane, hexane, toluene, methylcycl hexane, heptane, xylene, ethylbenzen octane, mesitylene, naphthalene, car phene, decane, light oil, gasolin kerosene, solvent naphtha, Stodda solvent and petroleum ether.

2,811,480

Phosphorthioate Compositions an Methods for Controlling Parasites A tacking Animals. Patent issued Oc 29, 1957, to Mark G. Norris, Jr., an Lisby L. Wade, Lake Jackson, Texa assignors to The Dow Chemical Co Midland, Michigan. A method for co trolling parasites attacking war blooded animals which compris orally administering to the animal chemotherapeutic dosage of a sy temic agent selected from the grou consisting of the O-aryl O-meth phosphoroamidothioates, O-aryl ethyl phosphoroamidothioates, O-ar O-methyl N-methyl phosphoroamid thioates, O-aryl O-ethyl N-meth phosphoroamidothioates, O-aryl methyl N-ethyl phosphoroamidothi ates, O-halophenyl O,O-dimeth phosphorothioates and O-halophen O,O-diethyl phosphorothioates, wher in O-aryl represents a member of th group consisting of O-(4-methox phenyl), O-(4-lower-alkyl-2-chlor phenyl) and O-halophenyl, and hal phenyl represents a member of th group consisting of O-(monochlor phenyl), O-(2,4-dichlorophenyl), (2,5-dichlorophenyl), O-(3,4-dichlor phenyl) and O-(2,4,5-trichlorophenyl

Industry Trade Marks

.The following trade marks were publish in the Official Gazette of the U.S. Patent Offi in compliance with section 12 (a) of th Trademark Act of 1946. Notice of opposit under section 13 may be filed within 30 da of publication in the Gazette. (See Rules 20 to 20.5.) As provided by Section 31 of the a a fee of $25 must accompany each notice opposition.

Butacide, for insecticide and pisc cide synergist. Filed April 8, 1957, b Food Machinery and Chemical Corp New York. First use Feb. 28, 1957.

Telone, for soil fumigant. File April 12, 1957, by The Dow Chemic Co., Midland, Mich. First use Fe 20, 1956.

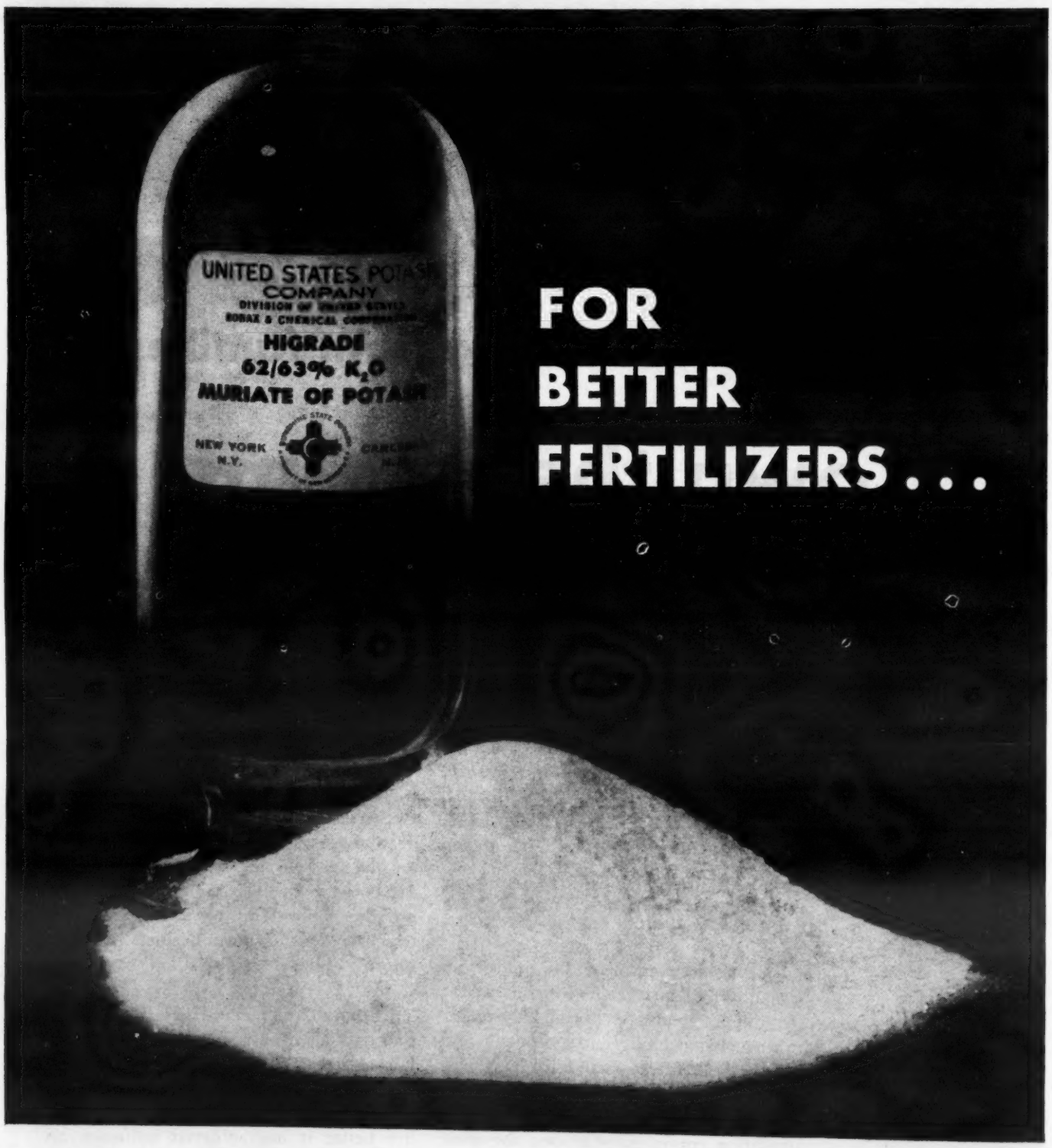
Chevron design in red, white an blue, for chemicals and chemical in termediates including parasiticide insecticides, germicides, fungicide herbicides, fumigants, weedicides, ov cides, miticides, soil fumigants, in secticide deposit builders, dusting su furs, animal insect repellents and po sons, sulfur, dry emulsifiers, spread ers, insecticidal, germicidal and fu gicidal sprays, spray adjuvants, see treating chemicals, insecticidal bait Filed Aug. 9, 1957, by Standard O Co. of California. First use June 1956, on motor fuel ice preventive.

Magic Grow, in capital letters, fo fertilizer. Filed March 29, 1957, b Faesy & Besthoff, Inc., New Yor First use Nov. 28, 1956.

The letters, FB, hand-lettered wit in box-like frame, for fertilizers. File April 22, 1957, by Minnesota Far Bureau Service Co., St. Paul, Min First use Feb. 1, 1957.

STORAGE SPACE ENLARGED

PORTLAND, ORE.—Webfoot Fe tilizer Co. is building a 20 x 60 foo addition to its plant here for storag purposes at a cost of $15,000. It wi increase storage capacity by 2,40 feet and will add 400 tons to th storage capacity of its plant. In addi tion, the main plant of the compan is being remodeled to fit into the ne addition.



USP'S HIGRADE MURIATE OF POTASH

USP's Higrade muriate of potash (62/63% K_2O)—perfect for the manufacture of modern fertilizers. This superior white potash is non-caking and free-flowing throughout.

Our Technical Service Department stands ready to answer any inquiries.

USP also offers Higrade Granular muriate of potash—62/63% K_2O—and Granular muriate of potash—60% K_2O—both free-flowing and non-caking.

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50 Rockefeller Plaza, New York 20, New York
Southern Sales Office: Rhodes-Haverty Building, Atlanta, Georgia

MEMBER: AMERICAN POTASH INSTITUTE

REG. U.S. PAT. OFF.

Hugo Riemer

ONORED BY FFA—Hugo Riemer, esident of Nitrogen Division, Al- d Chemical & Dye Corp., has been ected chairman of the sponsoring mmittee of the Future Farmers of nerica Foundation. His election k place at the annual convention the Future Farmers of America, d in Kansas City, Oct. 14-17. Mr. emer will take office Jan. 1 for a e-year term and will direct fund sing activities for the Foundation's ards program. The new chairman for a number of years been ac- e in FFA work, including mem- rship on various award committees.

les Up, Earnings Down, PCC Says in Report

LOS ANGELES—Operations of nerican Potash & Chemical Corp. the first nine months of 1957 re- ted in higher sales than in the cor- ponding period last year although rnings were slightly lower, Peter lefax, president, has announced.

Sales for the nine months ended pt. 30, 1957, totaled $32,646,615 mpared with $31,199,553 for the ne period last year. Net income ounted to $3,556,502 equal after ducting preferred dividend require- nts to $1.78 a share on the 1,907,- shares of Class A and Common o c k outstanding. This compared h $3,684,188 or $1.91 a share on 1,842,150 shares of Class A and mmon stocks outstanding on Sept. 1956.

For the three months ended Sept. 1957, sales totaled $10,878,669 as mpared with $11,242,707 in the ne quarter a year ago. Net income the third quarter was $1,071,170 or a share after deducting preferred idends, against $1,287,563 or 67¢ a re a year ago.

During the first nine months of 7, shipments of several of Ameri- Potash's major chemical products e been below 1956 levels due to er rates of operations in some of principal consuming industries ved by the company, Mr. Colefax ted.

il Analysis

LKTON, MD. — The Jackson B. ster Agricultural Research Labora- ies, Elkton, Md., cooperated with nsted Brothers, Brookline, Mass., dscape architects, in analyzing the s for the landscaping of the 14- e Patapsco Tunnel Project in Bal- ore, Md. The analyses consisted of 6 individual determinations and resented the general characteris- of the soil, pH value, organic tter content, available nitrate and monia nitrogen, phosphorus, po- n, calcium, magnesium, iron, man- ese, boron, copper, zinc, molyb- um, sulfates, chlorides, aluminum total salts. Recommendations for amendments were made. The hway will be open in December.

Farmers Exchange to Build Fertilizer Plant On New England Site

DETROIT, MAINE—A new fertilizer manufacturing plant will be built on a 180-acre site here by the Eastern States Farmers Exchange of West Springfield, Mass., it has been announced by W. D. Milsop, general manager. Construction of the first building is scheduled to begin early in 1958.

The plant will be located beside the Maine Central Railroad's mainline tracks on the Portland-Bangor route. Sidetracks will be constructed to serve the newly purchased area.

Although details of construction are still to be developed, the first plant building will be approximately 300 by 150 ft. It will be equipped with automatic conveyor systems and highly mechanized equipment in order to produce high-analysis granulated fertilizers.

In addition, Mr. Milsop said, "the new plant will distribute fertilizing materials, such as ammonium nitrate, muriate of potash and phosphates." The first plant, Milsop said, "should be completed so that fertilizer deliveries can commence by Jan., 1959."

Mr. Milsop said the new plant will be the fifth fertilizer plant owned and operated by Eastern States Farmers' Exchange. Other Eastern States Farmers' plants are at Wilmington, Del., and York and Kitpanning, Pa.

"The new plant will serve especially the rich agricultural area of Central Maine and Aroostook County. To a lesser degree it will serve western Maine," Mr. Milsop said.

NEMATOLOGY WORKSHOP

COLUMBIA, S.C.—Shell Chemical Corp. will hold another in its series of nematology workshops at Drayton Hall, University of South Carolina, Dec. 18-19, the firm has announced.

Frontier Announces Staff Appointments

WICHITA, KANSAS — Melvin E. Clark, vice president in charge of marketing for the Frontier Chemical Co., Wichita, has announced three sales staff appointments.

Richard H. Barton, Atlanta, Ga., who has been associated with the company since April, has been promoted to the position of product manager, insecticide chemicals; Bill G. Quick has been appointed product manager for the company's salt division at Odessa, Texas; and Bob Redmond, for several years with Frontier's Wichita sales department, has been named sales control manager in the Wichita executive offices.

Mr. Redmond was formerly sales representative for Olin Mathieson Corp. and Ethyl Corp. While in the employ of these companies, he was active in the sale of agricultural chemicals in the southeastern part of the country.

PENICK SPONSORS WARFARIN CONTEST

$1,000.00 for Best Dealer Display

PLUS

2 PRIZES OF $500.00 EACH FOR DISTRIBUTORS' SALESMEN

This unusual contest is open to all dealers where state laws permit. It is designed to stimulate dealers' imagination in better "point-of-sale" merchandising and to simplify consumer purchasing of Warfarin, world's leading rat-killer!

Here are the simple rules:

1. Set up a store or window display with WARFARIN. No other rodenticide is to be included.
2. Keep this display up for two consecutive weeks, anytime between Nov. 1 and Dec. 15, 1957.
3. PHOTOGRAPH THE DISPLAY and mail the photograph along with your completed entry blank to:
   WARFARIN CONTEST
   S. B. Penick & Company
   50 Church Street
   New York 8, New York
4. Contest is subject to all federal, state and local regulations.
5. Entries will be judged for originality, attention value and merchandising effectiveness. In the event of ties, duplicate prizes will be awarded. The decision of the judges is final.
6. All entries become the property of S. B. Penick & Company. None will be returned.
7. All entries must be received by December 17, 1957.
8. Winners will be notified by telegram.
9. Obtain entry blanks from your distributor or write Warfarin Contest, S. B. Penick & Company.

"The World's Most-Wanted Killers"

Di-Sodium Methyl Arsonate • Dethmor® Warfarin • Pro-Noxfish® • Sulfoxide®

Agricultural Chemical and Insecticide Division

S. B. PENICK & COMPANY 50 CHURCH ST., NEW YORK 8

PENICK

735 W. DIVISION ST., CHICAGO 10

BENSON

(Continued from page 1)

cited by the opposition as little less than "desperate"—verging on bankruptcy. The facts do not fulfill this condition, but more about that later.

Nevertheless surface conditions indicate that the farm problem is worsening, particularly for feed grains and livestock and its products, as the congressional election year rolls round. What can be done at this late hour to avert the crisis which may be facing farm prices next winter?

It must be considered that the administration politicians may sense that the wiser course might be to let the Democratic opposition win the congressional elections and then put into its lap the problem of bailing out the farmers before the 1960 elections.

Political soundings find many Republican farm leaders unwilling to take over from Mr. Benson under current unfavorable surface circumstances. That could only mean that a successor to Mr. Benson would merely be a caretaker who would retain office during the closing years of the Eisenhower administration with a makeshift program and subject to replacement if the administration came through with another presidential victory in 1960 with the now favored candidate, Richard Nixon.

Speaking off the record on the farm price outlook immediately ahead, one reliable U.S. Department of Agriculture source called the situation "rough—rough—rough." Emphasis on the problem centers around feed grains and the concomitant effect on livestock and livestock products as the 1958 elections near.

Farmer's Position Not Bad

The facts of the matter regarding the situation of the farmer are really not as bad as the politicians represent.

National net farm income for the years 1956-57 at approximately $12 billion annually is not bad when measured against the pre-war year of 1939. The Benson critics only compare present farm income with the best recent years as 1947-48 when there was a world cereal shortage and a heavy demand pent-up under war time rationing and price controls.

Immediately following those excellent farm income years, and between 1948-1952, labor caught up through wage advances which became a built-in factor in the prices farmers paid for things they buy.

It is interesting to examine the advance of prices paid by farmers between 1939-52 where the climb was 135%. Since 1952 the increase in prices paid by farmers has actually risen by about 5%.

Prices of things the farmers bought increased and rose in that pattern whereas the farm price fell as the acceleration of production gained speed through improved farm technology, use of fertilizer and irrigation techniques. As has been repeatedly remarked in this publication, the back-breaking factor in the farm price situation was the failure of the previous secretary of agriculture to impose indicated wheat acreage allotments in 1951, when most data indicated that the world wheat demand was declining and U.S. domestic production and carryover stocks were top heavy.

Mirage of Statistics

What the national and state farm politicians can do with statistics is a caution. They point with alarm at the approximate $12 billion net farm income for the years 1956-57 as compared with 1947-48. But they fail to disclose that this total net income was being shared by fewer farmers and that this net income reflected a much larger depreciation of mechanized farm machinery than had been found in farm accounting previously.

Even in the hands of most abstract workmen, statistics are merely a mirage, subject to the most subtle interpretations. Census bureau reports indicate that for 1954 approximately 1 million farmers had gross incomes over $5,000 annually.

Yet if that example was to be laid down alongside the number of farmers who applied for reimbursement of gasoline tax payments for fuel used in their farm operations, it must be inferred that there is something sadly wrong with the claim that the farm community as a whole is suffering a chronic financial illness.

Few can deny that the farm problem is unsolved and that the present farm law is not meeting the needs of the hour and as long as it remains unchanged there is little hope that the piling up of surpluses can be halted and farming can be adjusted to the rest of the national economy.

Mr. Benson has lowered price supports against heated opposition, again from both sides of Congress in most instances. But farm technology was racing way ahead of the farm politicians with the result that crops have increased and surpluses mount not to a point where present storage facilities seem inadequate. Export markets are in many instances saturated and production of end products for feed grains no longer can be absorbed even with national income and employment at peak levels.

The farm price outlook is described by some as perilous and on the precipice of a bad break, notwithstanding all the political guile which can be contrived to stop it.

Why Blame Mr. Benson?

But who can charge that Mr. Benson is the evil genius who contrived it? Mr. Benson accepted the soil bank as conjured up by Democratic opposition in the House. In its first year of operation the House Democratic majority provided, through the soil bank, a cash bounty for the commercial corn belt. He wanted to impose cross-compliance with acreage allotments for other crops only to merge into a solid phalanx of opposition from farm belt politicians on both sides of the House chamber.

What alternative would the Benson opposition suggest? A return to high supports, perhaps? Expanded export disposal programs? Direct payments to producers to compensate for the difference between the market price they receive and some level of parity support which would obviously also require some control on production levels?

With such necessary controls on output — and output control now seems to be chief problem—it is difficult to see wherein the small "family farm" would benefit, particularly as 40% of what are now defined as farms only obtain a cash income of $1,200 a year or less from their farming operations.

A companion high nitrogen fertilizer for your quality mixed goods.

Be sure you have plenty on hand when your farm customers ask for

New, Guaranteed* Free-Flowing Phillips 66 Ammonium Nitrate!

This great new Ammonium Nitrate and consistent advertising support offer you exciting new sales opportunities. Millions of farmers have read about new guaranteed free-flowing Phillips *66* Ammonium Nitrate. They know that an exclusive new Phillips process produces Phillips *66* Ammonium Nitrate with prills that are round, hard, dry and uniform. There's no caking, clogging or bridging in the applicator; and it flows freely to give more even feeding of crops.

Its performance is guaranteed, and performance counts with your customers! You get the full backing of Phillips Petroleum Company in this guarantee of free-flowing performance we offer your customers—

**"New Phillips 66 Ammonium Nitrate is guaranteed to flow freely when stored and applied in a normal manner. If you are not satisfied that it lives up to this guarantee, your fertilizer dealer will replace it at no additional expense to you."*

Cash in on the advertising of new Phillips *66* Ammonium Nitrate. Order your supply now.

PHILLIPS PETROLEUM COMPANY
Phillips Chemical Company, a Subsidiary, Bartlesville, Oklahoma

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CHICAGO, ILL.—*7 South Dearborn St.*
DENVER, COLO.—*1375 Kearney St.*
DES MOINES, IOWA—*6th Floor, Hubbell Bldg.*
HOUSTON, TEX.—*6910 Fannin St.*
INDIANAPOLIS, IND.—*1112 N. Pennsylvania St.*
KANSAS CITY, MO.—*500 West 39th St.*
MINNEAPOLIS, MINN.—*212 Sixth St. South*
NEW YORK, N. Y.—*80 Broadway*
OMAHA, NEB.—*6th Floor, WOW Building*
PASADENA, CALIF.—*330 Security Bldg.*
RALEIGH, N. C.—*401 Oberlin Road*
SALT LAKE CITY, UTAH—*68 South Main*
SPOKANE, WASH.—*521 East Sprague*
ST. LOUIS, MO.—*4251 Lindell Blvd.*
TAMPA, FLA.—*3737 Neptune St.*
TULSA, OKLA.—*1708 Utica Square*
WICHITA, KAN.—*501 KFH Building*

Nebraska Dealer Wins Customers With Complete Fertilizer Service

By AL P. NELSON
Croplife Special Writer

By being able to offer the farmer a complete fertilizer service, Sherry's Produce, Wayne, Neb., owned by Orville and Dan Sherry, gets a sizable volume of this business most months of the year.

The firm has a sizable fertilizer volume in dry fertilizer, both in bag and bulk forms. The company has a large truck and trailer which hauls fertilizer in bags from a plant at Sioux City, Iowa, about 50 miles distant. A great deal of this bagged fertilizer in fall and spring is unloaded from the truck right on the farmer's premises.

In addition, Sherry's Produce also has a large bulk fertilizer truck and spreader and extensive use is made of this during fall and spring on Iowa corn fields where farmers fertilize heavily to improve yields. Numerous farmers raise between 75 and 125 bu. per acre on corn land, except in dry years.

Supplementing the dry fertilizer line, Sherry's Produce also sells and applicates liquid fertilizer. The firm has liquid nitrogen stored separately and this past year it has also started to sell mixed liquid fertilizer.

This year liquid nitrogen was spread between the rows of growing corn. The company also has a jeep weed sprayer which is usually kept very busy during the summer.

For such service the customer is charged an hourly rate, plus the cost of materials. In addition, Sherry's Produce has a large stock of farm chemicals in its show room which farmers and gardeners buy, many of them having their own power or hand sprayers. A constant display of these chemicals helps to create more sales seasonally.

Because much of the firm's storage space is used for formula feeds at certain times, some fertilizer in bags is stored outdoors under a huge tarpaulin during the busy season. It can be loaded easily from this location, and being close to the street it is also a mighty good advertisement.

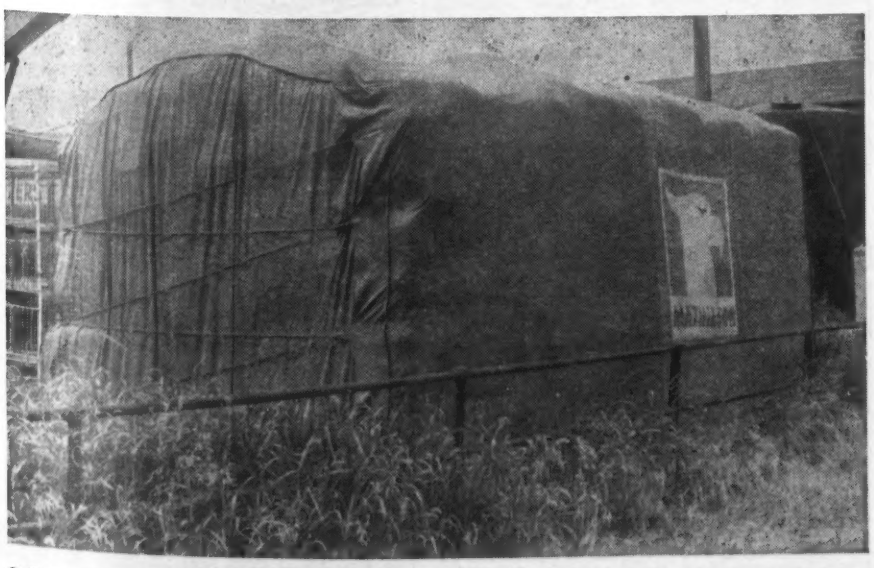
Orville Sherry, who manages the business, has such a versatile merchandising and service program that many employees are actually salesmen in the field. For instance, the firm has a mobile milling service which takes care of the grinding and mixing needs of more than 100 farmers regularly. The mill operator and his helper can often suggest fertilizer and farm chemicals to customers and thus make sales, too. These men are right on the farm several times a month and are in an excellent position to get fertilizer business.

Also, the men who collect eggs and cream from farmers watch their opportunities to sell fertilizer and farm chemicals.

Mr. Sherry is keenly aware of the benefits of good advertising. He uses some radio copy and also some theater screen ads, plus some newspaper copy. Several years ago he used a radio program in which two fictional characters, Ma and Pa, talked about farm needs and problems. The skits were written by Mrs. Sherry who formerly was on the staff of a radio station. The program attracted considerable comment. Ma and Pa are in retirement for the present, but may be revived a little later on, Mr. Sherry states.

Most farmers come in to get their feeds regularly, but if a farmer wants bulk feed delivered, Mr. Sherry uses the bulk fertilizer truck with an auger to handle the job.

Thus with his all around service to the farmer, Mr. Sherry finds that fertilizer and farm chemicals can be sold many months of the year to farmers to whom he is giving other service in a satisfactory manner. It shows the value of related lines to fertilizer dealers.



OUTSIDE STORAGE—Although not a regular practice, Sherry's Produce, Wayne, Neb., has had to resort during the busy season to storing bagged fertilizer under this large tarpaulin. The firm takes advantage of the outside location to display advertising signs on the tarpaulin.

Missouri Short Course

COLUMBIA, MO. — The Missouri Soil Fertility Short Course will be held Dec. 19-20 at the University of Missouri here, according to an announcement by B. B. Mainord, president of the Soil Fertility and Plant Nutrition Council of Missouri.

SHOP TALK

OVER THE COUNTER

By Emmet J. Hoffman
Croplife Marketing Editor

Dealers know from experience that fertilizer is more difficult to sell when their prospects—the farmer and the rancher—are the victims of a cost-price squeeze such as has been the case for a few years. It is times like these which test the selling ingenuity of the fertilizer retailer. It also happens in some cases that dealers aren't enterprising enough to operate profitably so they have to go out of business.

On the other hand, there is evidence—backed up by the opinions of well informed farm chemical industry leaders—that enterprising dealers not only stay in business but even expand a profitable operation.

These dealers are the ones who do a superior job of buying and selling merchandise and servicing the customer.

In this department this week is offered the thinking of Ernest Harper, sales supervisor, Nitrogen Division, Allied Chemical & Dye Corp., on buying, which is one aspect of the "trinity"—buying, selling and servicing. In the following weeks selling and servicing will be discussed.

What are the main points to be considered by the dealer in his buying program? Mr. Harper feels that the most important point is to handle first quality merchandise.

"Well bought is half sold," is an adage that is particularly true in the fertilizer business. Long term successful operation depends not merely on selling fertilizer to a farmer for one year, but getting and keeping him as a customer year after year. Unprofitable results from using low-cost, low-grade fertilizer eventually will reflect adversely on the dealer and consequently on all of his products and services.

Price, in the long run, is only relative to the value of the product and the value of the dealer's services.

Fertilizers that make the most profit for the farmer will make the most profit for the dealer.

What economies can be practiced in buying?

Buying early and taking advantage of pre-season discounts is one. Early delivered fertilizer sold in March or April will bring substantial profits. Also, by ordering early, the dealer eliminates risk of failing to get delivery when the rush season starts. A farmer wants fertilizer when he is ready to use it. If one dealer can't supply it, he may go to another who can, and possibly go there first the next time.

What can be done about financing arrangements?

The dealer's best bet for establishing economical and satisfactory credit arrangements is with his local banker. Manipulating money is a banker's business; producing fertilizer is the manufacturer's.

A banker is in a much better position to work out more satisfactory financing than can be accomplished between a dealer and manufacturer.

Often he can make it possible to increase profit possibilities through use of cash discounts. Certainly, a banker is one of the most influential friends a dealer can have. Once he understands the relationship between proper soil fertility and crop yields, he may make adequate fertilization a condition in granting crop loans to farmers.

What should be expected from the suppliers?

First, that they have a long reputation for manufacturing highest quality materials. Second, that they maintain a sound, aggressive advertising and promotional program.

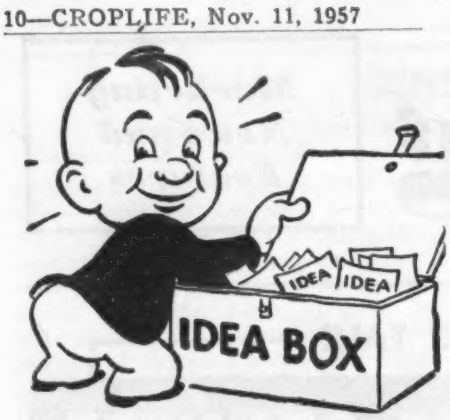
Extensive advertising and other forms of promotion afford a tremendous benefit in creating and maintaining consumer demand.

Manufacture of quality products also demands the services of technical experts and facilities for making possible constantly improved products, and the services of competent agronomists and other specialists for developing new uses for fertilizers, and conducting field tests to discover new methods and rates of application for most profitable results. These experts also can give a tremendous impetus to local sales promotions by offering sound agricultural advice at farmer-dealer meetings and similar events.

Reliable manufacturers will retain only reliable spokesmen rather than quacks intent on influencing quick sales. A manufacturer also should be able to supply a variety of fertilizing materials designed for every need, and furnish effective selling tools in the form of manuals, advertising copy, and a variety of up-to-date sales literature.

Manufacturers who specialize in low-cost fertilizer and operate on the lowest possible margin of profit cannot perform these costly services, Mr. Harper states.

"How much are we paying you now, Quentin?"



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6654—Sprayer, Duster Catalog

The Oakes Manufacturing Co., Inc., subsidiary of the Food Machinery & Chemical Corp., has released its "Sanitized Bean Oakes 1958 Sprayer and Duster Catalog." The catalog shows a line of tank and hand sprayers, dusters and power sprayers for use on the farm and in the garden. John Bean Division and Oakes are sharing production responsibilities for these products. New additions to the products which Oakes will sell through its jobber and dealer accounts are the "Spartan" and "Trojan" lines of power sprayers. Secure full details by checking No. 6654 on the coupon and mailing it to Croplife. Please print necessary information on the coupon.

No. 6652—Bagging Unit

The Chase Bag Co. has announced a new bagging unit for the fertilizer industry. It is called the "Southland Packer" and it is described as a completely automatic, all-electric device for filling and weighing open mouth textile or multiwall paper bags. It is manufactured by the Chattanooga Boiler & Tank Co. and is distributed exclusively by Chase. It is claimed

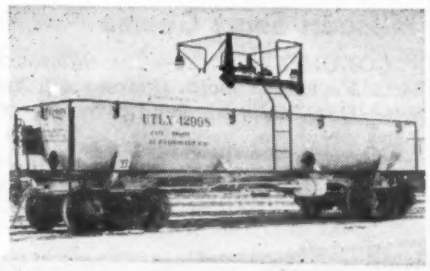
that the unit will handle 50-, 80- and 100-lb. multiwall paper bags at 25 bags per minute as a typical working speed. Sustained high accuracy of weights over an extended run is guaranteed. Fertilizer and any other granular or free flowing material can be packed. Chase officials state: "Minimum change-over time from one analysis to another is an outstanding feature." Cylindrical hoppers and buckets allow a clean and complete flow of material. Simplicity of design reduces maintenance costs and problems. Parts are standardized and can easily be interchanged in plants where more than one packer is in use. No air or hydraulic fittings are used. The packer is made from 12 gauge or heavier steel plate and requires no external bracing for rigidity. The feeder is of the continuous operating type, using a ½ h.p. gear-enclosed motor to operate its endless belt, over 8 in. self-cleaning pulleys. Check No. 6652 and print the necessary information on the coupon and mail it to Croplife to secure details.

No. 6653—Industrial Chemicals Folder

Sohio Chemical Co. has prepared a folder on its industrial chemicals, which include anhydrous ammonia, aqua ammonia, nitric acid, urea and 83% ammonium nitrate solution. Specifications, descriptions, uses and shipping information are listed for each of the products. The folder states that rail or truck delivery is available and that technical assistance and laboratory service are offered without obligation. Secure details by checking No. 6653 and printing the necessary information on the coupon and mailing it to Croplife.

No. 5870—Tank Car

A new multi-purpose tank car which incorporates two fundamental changes in tank car design—elimination of the dome and underframe—is announced by the Union Tank Car



Co. Called the "HD" tank car, the unit serves where previously four separate tank classifications were required, company officials say. With only minor modifications the new tank car can be used as a general service car; for carrying acid; as an insulated car; and as a low pressure car. Secure details by checking No. 5870 on the coupon and mailing it to this publication.

No. 5844—Vacuum Cleaners

A new line of heavy duty wet-dry vacuum cleaners has been introduced by the Clarke Sanding Machine Co. The line includes six units ranging from a ½ h.p. model with 2½ gal. wet and ½ bu. dry capacity to a 1½ h.p. conversion unit which converts a 55-gal. drum into a vacuum cleaner tank with 50 gal. wet and 6½ bu. dry capacity. Check No. 5844 on the coupon and mail it to secure details.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 6649—Fertilizer Spreader

The Highway Equipment Co., Inc., announces a new model, the "New Leader 3 Material Spreader." Nitrogen, phosphate, and potash are spread to the proper proportions as determined by the soil analysis of the land to be fertilized, it is claimed. The announcement states: "The spreader hopper is divided into separate compartments for three different fertilizers. A 36 in. wide heavy-duty 4-ply belt over a chain conveyor carries the fertilizer back to the cross augers at the rear of the machine. Each fertilizer is conveyed back on a separate section of the 36 in. belt. Sealer strips along the sides and at the end of the individual compartments keep the three fertilizers separated until they

are dropped into the cross auger at the rear of the machine. The three fertilizers are first augered to the left, dropped into another auger, then augered back to the center of the spreader where they are dropped directly into twin distributor fans which uniformly distribute the fertilizer into the streamlined hood for an accurate spread. The hood, which spreads a 24 ft. width, is of sturdy construction and yet lightweight enough so that it can be folded easily by one man for road travel. The steep sloping sides of the hopper and the wide belt conveyor eliminate bridging. Special cleanout doors are provided for inspection, servicing, and daily cleaning." Secure details by checking No. 6649 on the coupon and mailing it to Croplife.

No. 6645—Liquid Surfactant

A vegetable oil source liquid surfactant, called by the trade name Sole-Onic PGE, is described in a released by the Sole Chemical Corp. Company officials say that two of its uses are as a wetter-sticker adjunct for agricultural sprays, and as an anti-corrosion agent in water-containing aerosols. The bulletin may be secured by checking No. 6645 on the coupon and mailing it to Croplife. Please print name and address.

No. 6646—Product Booklet

The family of chemical products for industry and agriculture of the Diamond Alkali Co. is described in the fifth edition of a booklet called "The Story of Diamond Chemicals—Chemicals You Live By." This revised and enlarged, 32-page booklet presents a panoramic picture of these basic materials, their principal applications, and their production.

Fourteen major products or product-groups are discussed in digest form. They are: Soda ash, caustic soda, chlorine, chlorinated methanes, bicarbonate of soda, sodium silicates, calcium carbonates, chromates, spe-

Send me information on the items marked:

☐ No. 5822—Dust Collector	☐ No. 6646—Booklet
☐ No. 5838—Towing Tractor	☐ No. 6647—Tractor
☐ No. 5844—Vacuum Cleaners	☐ No. 6648—Insecticide
☐ No. 5870—Tank Car	☐ No. 6649—Spreader
☐ No. 6640—Urea	☐ No. 6650—Leaflets
☐ No. 6641—Calculator	☐ No. 6651—Garden Chemicals
☐ No. 6644—Equipment	☐ No. 6652—Bagging Unit
☐ No. 6645—Surfactant	☐ No. 6653—Chemicals Folder
(PLEASE PRINT OR TYPE)	☐ No. 6654—Sprayer Catalog

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cialized chemicals, organic chemicals, plastics, cement, coke and coke by-products, and agricultural chemicals, including lawn and garden chemicals. A copy is available on request. Check No. 6646 on the coupon and mail it to Croplife. Please print name and address.

No. 6641—Calculator

A new type of calculator has been designed by the Phosphates and Nitrogen Division of the American Cyanamid Co. as an aid in determining quantities of phosphatic materials

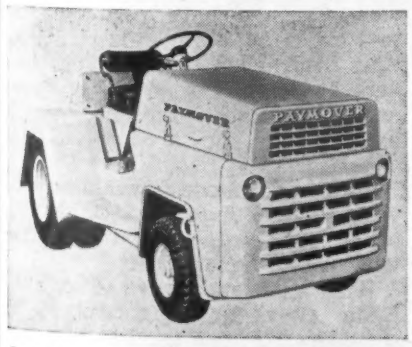
to be added when formulating various grades of mixed fertilizers. The calculator can be obtained by fertilizer manufacturers who check No. 6641 on the coupon and mail it to Croplife.

No. 6650—Soil Pest Leaflets

How major soil pests can be treated by soil fumigation is described in a series of three new leaflets published by the Stauffer Chemical Co. Practical procedures are outlined for the use of a product trade named, Vapam, to kill annual and perennial weeds and germinating weed seeds, soil fungi which cause seed decay and damping off, nematodes and such insect pests as the garden centipede. Each of the leaflets deals with a specific agricultural problem — growing finer turf, flowers and shrubs, and vegetables. Copies are available without charge by checking No. 6650 on the coupon and mailing it to Croplife.

No. 5838—Towing Tractors

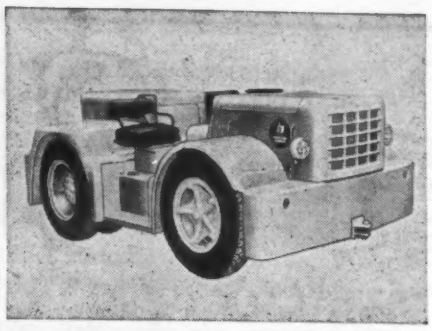
The Frank G. Hough Co. has introduced its first two "Paymover" towing tractors for commercial applications. The two machines are the model T-50 with 5,000 lb. drawbar pull and the model T-60 with 6,000 lb.



drawbar pull. They are two-wheel drive models, and feature torque-converter drive and automatic transmissions. A wide variety of coupler attachments is available. Check No. 5838 on the coupon and mail it to secure details.

No. 6647—Towing Tractor

The Frank G. Hough Co. has announced the availability of a new Paymover tractor. The unit, model T-150, develops 15,000 lb. of drawbar effort and features power steering, four-wheel power brakes, power shifted transmission, dual rear tires, planetary-type final drives and a choice of gasoline, or LPG power, company officials state. It has travel speeds up to 22 m.p.h. The tractor is suited for industrial, rail and motor truck terminals and other tractor applications. Head and tail lights are standard equipment. A wide variety of accessory equipment and attachments is also available, including 2-way radio units, aircraft engine starting systems, cabs, snow-plows, sweepers and winches. For detailed specifications or more information check No. 6647 on the coupon and mail it to Croplife.

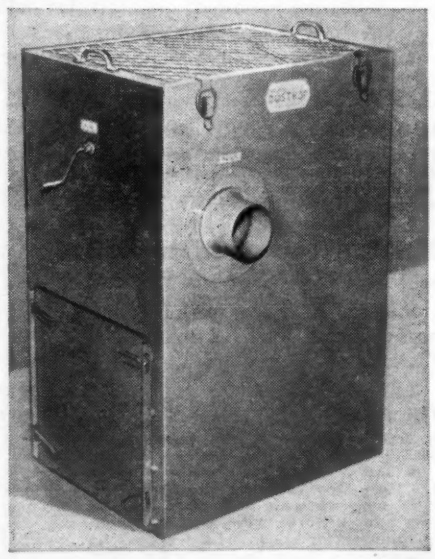


No. 6651—Home Garden Chemicals

Several new chemical formulations bring to a total of 28 the number of insecticides and other chemicals which are in the Du Pont Company's line of products for the home gardener. Among the new products are an insecticide which is a combination of methoxychlor and malathion and 72% chlordane insecticide. Also new are an insect repellent and an aerosol dressing for tree wounds. Secure details by checking No. 6651 on the coupon and mailing it to Croplife.

No. 5822—Dust Collector

A special, extra storage capacity dust collector, "Dustkop model 520-D," is the latest addition to the Aget Manufacturing Co.'s Dustkop



line. Ten inches higher than the standard model 520, it has identical air handling characteristics and base dimensions, but a dust storage bin that is over twice as large. The company recommends it for use in any shop operation where dust volume is unusually large. The base is 18 by 23 in, height 34 in. For detailed information check No. 5822 on the coupon and mail it to this publication.

No. 6648—Insecticide Booklet

A new booklet on the application of Phosdrin insecticide has been prepared by the Shell Chemical Corp. The booklet covers handling precautions, respiratory devices, details for aerial application, symptoms of toxication and first aid treatments, and information for physicians. The importance of following directions right to the letter is emphasized in the booklet. To secure a copy of the booklet without cost, check No. 6648 on the coupon, print the necessary information and mail it to Croplife.

No. 6640—Urea Ammoniating Solutions

A booklet on urea ammoniating solutions, including detailed unloading and handling instructions, has been issued by the Du Pont Polychemicals Department, manufacturer of "Uramon" ammonia liquors for the fertilizer industry. A chart in the booklet lists the advantages of urea nitrogen as a fertilizer for all crops. Other tables offer information on the characteristics of Du Pont's urea ammoniating solutions. In addition, special graphs report the pound-per-square inch (p. s. i.) pressures generated by the ammoniating solutions at various temperatures, and the temperature rise produced when these solutions are added to fertilizer mixtures. Unloading and handling instructions include schematic drawings of a tank car, and its various valves and connections. A copy of the booklet may be obtained without charge by checking No. 6640 on the coupon and mailing it to Croplife.

No. 6644—Liquid Fertilizer Equipment

General Metals, Inc., has published a new condensed catalog on its line of equipment for nitrogen solutions and complete liquid fertilizers. The company makes a line which includes such items as storage tanks and field applicators. The catalog gives brief descriptions of most all items in the line. Tanks of aluminum, steel and stainless steel are made in sizes ranging from 30 gal. to 22,000 gal. of both pressure and non-pressure types. Two wheel trailer applicators are made complete with trailer, tank, booms and pump. Other products described in the catalog are tractor applicators, a 3-point hitch applicator with 100-gal. tank and metering pumps. Secure the catalog by checking No. 6644 on the coupon and mailing it to Croplife. Please print name and address.

American Scientific Purchases CaPhenin

MADISON, WIS. — American Scientific Laboratories, Inc., manufacturers of veterinary biologics, medicinals and pesticides, has announced the purchase of the CaPhenin Chemical Co., formerly of Waverly, Iowa. The equipment and key personnel of the Iowa firm have been moved to Madison and form a part of the ASL chemical products division.

Through this acquisition ASL is expanding its activities in the pharmaceutical field as well as continuing the private formula manufacturing which was the primary interest of the Iowa concern. A. W. Tandy, former owner of CaPhenin, has been named director of the ASL pharmaceutical and chemical laboratory in Madison.

Gloomicides

The old experienced barrister, wise in his profession, was well aware that the judge hearing the case was noted for his bad temper and general testiness; but his junior was not so well informed.

Outraged by a decision from the judge, the young man shot to his feet. "Your Honor," he said heatedly, "I am amazed that you should make such a decision!"

There was a shocked silence. The old barrister, determined to retrieve the situation, rose also.

"Your Honor," he said, "my impetuous young friend intends no disrespect. He has much to learn. I can assure him that when he gains my amount of experience he will never be amazed at any decision Your Honor makes."

★

An old-timer is a man who remembers when the only problem about parking was to get the girl to agree to it.

★

The man that a woman can't make a fool of doesn't live. He merely exists.

★

The weary man had just settled down with his pipe and the evening paper.

"Sam," called his wife, "I've got a lot of things I want to talk to you about."

"Well, fine," said her husband. "Usually you want to talk about a lot of things you haven't got."

★

Who remembers the Good Old Days when a juvenile delinquent was a kid who owed a few cents on an overdue library book?

★

Just heard about an American tourist who couldn't pay his bill in a French sidewalk cafe—so they threw him in!

★

As usual, the girls were talking about marriage.

"I'll have trouble finding the kind of man I want to marry," commented Denise. "He'll have to be smart enough to earn a lot of money but stupid enough to give it to me."

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FLEX-A-FOAM
DUST MASK
(no other product like it . . . anywhere)
Here's everything that management and worker alike could possibly want in a dust respirator!
1. Form-fitting design: Self-adjusting to any size and shape of face without pressure or irritating discomfort.
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No wonder FLEX-A-FOAM is the one dust respirator workers welcome and WEAR!
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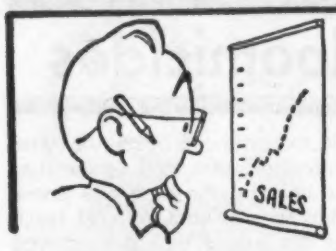

Doing Business With

Oscar & Pat

The old Seth Thomas clock on the office wall of Schoenfeld & McGillicuddy struck the half hour after one. Balding, rotund Oscar Schoenfeld, his lips in a set line, snorted. "Tsck, tsck!" he said irritably. "Again that Irisher stays out late for lunch. Why don't he come back on time like the rest of us? Ach, why don't he go out and collect? Instead he sits down at those Chamber of Commerce and Rotary and Kiwanis meetings where everybody shoots off their mouths so much even a bull would faint if he got in there. Ach, such a waste of time—those meetings."

"Men are different, Oscar," reminded Tillie Mason, the plump, ulcerish bookkeeper who had been patiently waiting now for five years for Dave Schuster, her bashful but steady suitor to gain the courage to pop the important question. "Pat likes to work nights, and you work daytimes. It will never be any different."

Oscar snorted again. "Ach, he is so different he don't put in two regular hours a day in this business. All night hours, visiting farmers, talking with them about hunting, fishing, baseball—everything except when they can pay."

The door from the warehouse opened at this moment and in came tall, blue-eyed Pat McGillicuddy and Eddie Bartz, a fertilizer dealer from the other end of the county. Bartz, a chubby, once handsome fellow with dark brown eyes and hair combed over a bald spot, laughed loudly.

"Hi, Oscar, old boy!" he boomed enthusiastically. "Pat and me just dreamed up a promotion idea over at the Happy Hour cafe that should spread fertilizer two inches thick over the hull dang county with lots of business for all us dealers. How's that?"

"We got too many ideas aroundt here already," Oscar replied coldly. "I got one idea—get my work done. Others should do the same and, ach, we would make more money." This last with a meaningful glance at Pat McGillicuddy.

Eddie Bartz was not easily rebuffed. He laughed again. "Boy, ain't he the kidder, Pat? It must be fun to be in business with a guy like that. Oscar, if I needed a partner and you was free to make a connection, dog-gone it, I believe I'd make you a proposition."

Oscar bit his lip, one eye on the old Seth Thomas clock. "Ach, I made a mistake once like that. I will not make it again. Not while I got my mind anyway."

Eddie Bartz chuckled. "Oscar, I feel just like you do now, too, once in a while. Especially when I eat something that don't agree with me, like chocolate pie a la mode on top of spareribs and sauerkraut. But don't worry, our promotion will pay. Now lend me an ear, and I'll give you the sales pitch on this idea."

In a confidential manner, Bartz edged his chair closer to Oscar's desk. The latter maintained a cold, impersonal stare.

"You see," Bartz said briskly, "Pat and I decided we gotta put some red hot promotional effort behind a fertilization program in this area."

"Ach, some one should get red hot on collections," threw in Oscar coldly.

Eddie Bartz grinned, winked at Pat and went on. "We gotta introduce something new into the program to get extra attention. And so we want to get all the dealers in the county together to stage a 'Fertilizer Week.' We'll all advertise cooperatively, state the reasons for fertilization and then offer a special discount for all fertilizer orders placed during early winter."

"Ach, you will get lots of business," Oscar predicted sarcastically. "Every deadbeat in the county will order fertilizer, have you deliver it and make you wait until next summer for your money."

"Oh, come now, Oscar, don't look at the dark side only," protested Bartz soberly, his good humor fading slightly. "Sure, we all got collection problems now and then. But most farmers pay eventually. Besides, if you read Kiplinger's News Letter out of Washington, an article this month says maybe people shouldn't try to save so much money. The country runs on credit, and don't dam up the flow."

"That's what's wrong with the country," Oscar barked loudly, his favorite trouble being opened up. "People spend too much. They think the more you spend the richer you get. Ach, such foolishness. Somebody has to pay the bill someday. You can't keep on putting it off. Then when we can't pay—poof, the whole bizness goes up."

"Well," said Bartz a little gaily, "if it goes up, we all go up with it. Meantime we're having lots of fun, making money and living good. Oscar, I'll bet even you'll be on hand when we have our fertilizer beauty contest along with this fertilizer drive."

"Beauty contest!" Oscar's eyes were wide. "Vot has that got to do with selling fertilizer?"

"Why we are going to have a big parade," Bartz said, "and we'll have a Miss Nitrogen, a Miss Potash and a Miss Phosphorus—a winner in each class. And they'll wear bathing suits. Ooh, la la!"

"I hope it snows," Oscar said in a shocked voice. "Then they will have to put some decent clothes on."

"But, Oscar," contributed Bartz, not comprehending such a narrow view, "farmers have eyes. They like to look at beautiful girls in bathing suits. And when they see those banners on Miss Nitrogen, Miss Potash and Miss Phosphorus in beautiful bathing suits, they are going to think of fertilizer."

Oscar's fist came down on his desk with such a fearful whack that his paper clip container rattled. "They will not!" he thundered.

With a resigned wave of his hand, Eddie Bartz got up, shrugged his shoulders. "I give up, Pat," he said. "Holy cow, if all the other dealers are going to react in this way, we might as well quit this promotion. We'll never be able to put it over." And he headed for the warehouse.

Pat followed him out there. "Listen, Eddie," he said. "Don't mind Oscar. He's that way about everything. But he can't stop me from doing my share to put this 'Fertilizer Week' over. I'll do it despite him, begorra, as I have done before. And with those agricultural speakers we can get for 'Fertilizer Week' and all the other promotions we'll have, I know we'll sell more fertilizer in the entire county."

"Maybe," Eddie Bartz said glumly. "But I'll revise the estimate I gave to Oscar. It won't be fertilizer two inches thick over all the county. With a lot of Oscars buckin' us, I'll settle for one eighth inch spread."

Books on Soils and Soil Management

SOILS AND FERTILIZERS—Fourth Edition
Firman E. Bear
Covers in detail: soil chemicals, important soil elements such as nitrogen, phosphorus, calcium; yield prospects of crop plants, moisture control, soil management; mechanical operations; soil conservation; organic matter maintenance. New facts, accurate figures. 66 illustrations, 420 pages **$6.00**

SOIL FERTILITY (1955)
C. E. Millar, Professor Emeritus of Soil Science, Michigan State College.
A fundamental treatment of the principles of fertility in the soil, with major emphasis on the plant itself. Relevant aspects of soil chemistry, soil physics, soil microbiology and plant physiology from viewpoint of their influence on plant growth. Each major plant food element and the more important micro-nutrients fully treated with respect to supply in the soil, sources and amounts of additions, losses from the soil, functions in plant growth and plant symptoms of deficiency. Covers all sections, with considerable space to saline soils and soils of southern latitudes **$6.75**

CHEMISTRY OF THE SOIL (1955)
Firman E. Bear
Presents a comprehensive picture of the chemical aspects of soils in relation to their development, present constitution and the uses to which they are put. Covers: chemical composition, soil, colloids, organic matter relationships, oxidation-reduction phenomena, acid, alkaline and saline soils, plant nutrition, nutrient fixation, trace element chemistry, root and soil relationships. Scientists engaged in soil research will find useful data directly applicable to their investigations. Food chemists, manufacturers and those manufacturing liming materials, fertilizers, soil conditioners, surfactants, wetting agents, insecticides, fungicides and other agricultural chemicals will gain new ideas for future product research and development. 384 pages **$8.75**

SOIL PHYSICS—Third Edition (1956)
Dr. L. D. Baver, Director Experiment Station Hawaiian Sugar Planters Association
This represents a considerable revision of the earlier versions and incorporates many ideas communicated to the author by soil scientists all over the world. Two new chapters on the principles of soil irrigation and drainage, discussion on soil puddlability, effect of chemical soil conditions on soil structure, and recent contributions of the diffusion process in soil aeration, and information on hydraulic conductivity, soil moisture stress and plant growth, the importance of compaction on soil tillage, and wind erosion processes. 489 pages **$7.75**

SOILS AND SOIL MANAGEMENT
A. F. Gustafson
A complete study of soils; physical properties, soil, organisms, organic matter, relation of water, control of water, tillage, erosion, acidity and its control by liming, management of alkali soils, nitrogen and its importance to the farmer, production, conservation and utilization of farm manures, production and utilization of green manure crops; fertilizer materials and their effects on soils; crop rotations; fertilization and long-term maintenance of productivity of mineral soils. Published 1941. 424 pages, illustrated **$6.00**

SOIL SCIENCE SIMPLIFIED
Helmut Kohnke
A concise textbook dealing with basic concepts of soils. Much useful information for students in agriculture, farmers, fertilizer salesmen, etc. 68 pages, paper bound **$1.00**

IRRIGATED SOILS: Their Fertility and Management—New 1954—Second Edition
D. W. Thorne and H. B. Peterson, Department of Agronomy, Utah State Agricultural College. Dr. Thorne is also Chief of Soils and Fertilizer Research Branch, Tennessee Valley Authority.
An outstanding text dealing with the problems of irrigated regions. In addition to the chapters dealing with irrigation, the salt problem, reclamation of saline and alkali soils, there are chapters on maintaining organic matter in soil, minerals and plant growth, fertilizer elements and fertilizer materials, using fertilizers, soil management for general field crops, for fruit, vegetable and specialty crops **$6.75**

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A new book, with special reference to Anhydrous Ammonia and other sources of nitrogen in liquid form. Deals also with legumes as a source of soil nitrogen, and the uncertainty of green manures; the response of soil to phosphorus, potash and soda; the effect of fertilizers on yield and feeding value of hay and pasture crops. 468 pages, 19 chapters, 89 illustrations **$4.50**

CHEMICALS, HUMUS AND THE SOIL
Donald P. Hopkins
The theme of the book is the necessity of chemical fertilizers to maintain the fertility of the soil. It has concise information on which soil conditions and which chemical fertilizers are most suited for special crops and vegetables. Space is devoted to cereal crops, barley, wheat, oats and rye; to roots and tubers, sugar beets, potatoes, carrots, parsnips and turnips; to vegetable crops, beans, peas, alfalfa, lupines; to grasses and clovers; to onions, flax, kale, cabbages, lettuce, tomatoes, celery, cauliflower and fruits. It clarifies the relationship of manures, compost and chemicals as fertilizers and points out how chemicals should be used to obtain the best results. Its philosophical soundness and logic should do much to avert the confusion of thought introduced by the advocates of compost and manure as against the use of chemical fertilizers **$8.50**

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What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

A two-day session which included talks on many angles of safety in the fertilizer manufacturing field was held by the fertilizer section of the National Safety Council at Chicago Oct. 21-22. George F. Dietz, safety director, Fertilizer Manufacturing Cooperative, Inc., Baltimore, was elected chairman of the section.

Three appointments by the National Plant Food Institute made in connection with an expanded educational program to cover various regions of the country include Dr. R. L. Beacher, with headquarters at Fayetteville, Ark.; Dr. Samuel L. Tisdale, with offices at Atlanta; and Dr. Richard B. Bahme, with headquarters at San Francisco.

A limited quantity of the new chemical compound, designated ET-57, will be supplied by the Dow Chemical Co., to certain cattle areas of four states to aid in controlling cattle grubs. The product is a systemic insecticide which is given to cattle internally. Some observers say it may save cattle growers millions of dollars annually in better meat and hides.

State control officials of fertilizers and pesticides met in Washington for their annual meetings. Paul T. Truitt, executive vice president of the National Plant Food Institute, made a plea for fertilizer consumption figures by materials and grades on a more uniform basis from all states. He suggested that such reports be made quarterly.

The pesticide control officials discussed tentative definitions for pesticides, defoliants and nematocides, as well as making a study of state laws in the light of the Miller amendment to the Food and Drug Act.

Stauffer Chemical Co. announced that its organic phosphate pesticide, Trithion, will be in large-scale production before next crop season. A multi-million-pound a year Trithion plant will be built near Henderson, Nevada, and it is expected to be in operation by February, 1958.

The National Plant Food Institute held a conference on chemical control problems at Washington, D.C. In charge of Dr. Vincent Sauchelli, NPFI scientist, the meeting heard discussions of modern methods of quality control in the manufacture of fertilizers.

A fertilizer conference held at Rutgers University, New Brunswick, N.J., heard discussions on the relationship between weather conditions and fertilizer use. The discussions indicated that if a plant is given a well balanced diet and a "full meal," it will be ready to grow fully when moisture conditions are correct.

J. T. Stevens and R. A. Lemler were named by the Nitrogen Division of Allied Chemical & Dye Corp. to sales positions.

A statistical article by Arnon L. Mehring, sponsored by the National Plant Food Institute, said that non-farm use of fertilizers amounted to about 10% of the total consumed in the U.S. At a conservative average price of $75 a ton, he said, the non-farm market comes to some $187.5 million a year, with some estimates going even higher.

The Western Agricultural Chemicals Assn. held its annual meeting at San Mateo, Cal., scheduling talks on weed control, nematodes, regulatory laws, and a program on what influences farmers to purchase and use pesticides. Ivor Burden, United Chemical Co., Richmond, Cal., was elected president of the group.

A report by USDA indicated that the soil bank is likely to exert a considerable influence on the kinds and numbers of insects in many parts of the country. Grasshoppers, particularly, will find in the reserved acreages, an increased amount of more favorable places for egg laying and a greater variety of desirable food plants. Other insects expected to increase in certain localities were listed as cutworms, wireworms, white grubs, Japanese beetles, European chafer, sod webworms, and corn flea beetles.

Alfred J. Dickinson, formerly vice president of Virginia-Carolina Chemical Corp., Richmond, Va., joined Freeport Sulphur Co. as vice president and sales manager, to succeed the late Roy B. Jones.

Southern Nitrogen Co. named Dallas Cantwell as general sales manager and F. R. MacCauley, controller.

Wilson & Geo. Meyer & Co. broke ground for a new office building and warehouse in Los Angeles. The new structure, when completed, will also house the Wilson Meyer Co., and other offices.

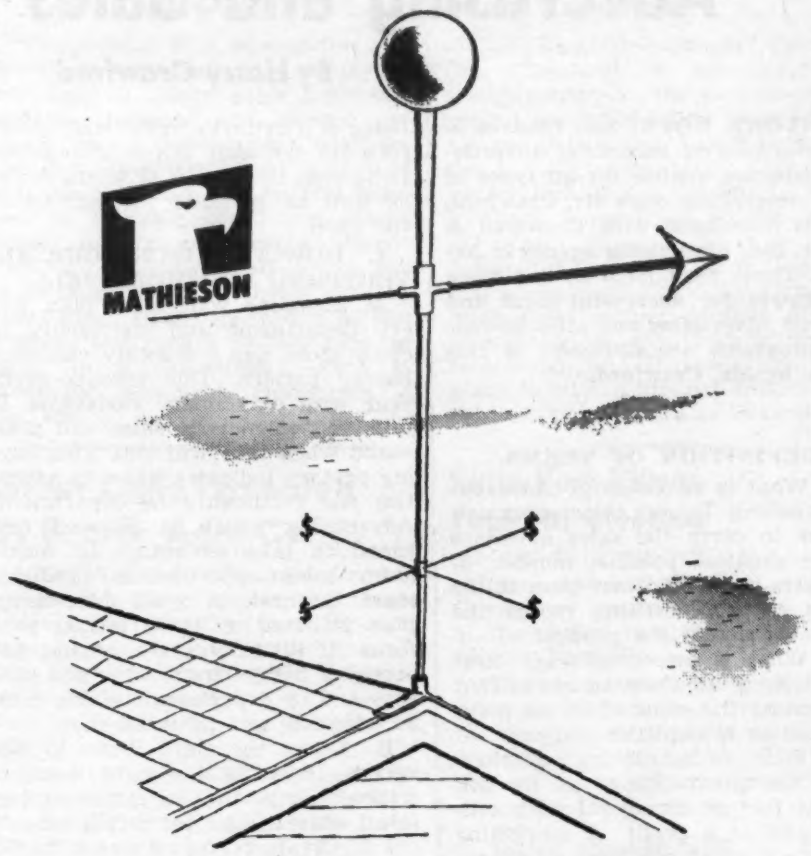
Talks by a banker, an educator, a fertilizer technologist and representatives from two other associations were featured at the eighth annual convention of the Pacific Northwest Plant Food Assn. in October. Some 250 fertilizer industry men were on hand at the meeting which was held at the Challenger Inn, Sun Valley, Idaho.

The California Ammonia Co. broke ground for its new 100-ton-a-day anhydrous ammonia plant, Oct. 12. The plant will cost about $4.8 million and construction is expected to be completed in October, 1958.

Merck & Co. announced a reduced price on its product "Gibrel", a giberellin product. The price went from $10 a gram to $4 a gram. Improvements in the manufacturing process and increased demand were given as reasons for the price change.

The Shell Chemical Corp. nematode workship at St. Louis, brought out the fact that nematodes cause "many millions of dollars" loss to crops each year. Some 200 agriculturalists heard a panel of USDA and university scientists discuss control of these soil pests in the one-day meeting.

Irrigated croplands need a high rate of fertilization to get optimum returns from the added investment, the USDA stated. "Before a farmer invests in supplemental irrigation, he should be willing and able to use high rates of fertilizer," the department said.



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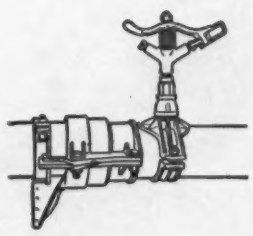

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Advertising and Sales Promotion

By Harry Crawford

EDITOR'S NOTE: The fundamental principles of successful advertising plans are similar for all types of retail enterprises, says Mr. Crawford, who is associated with Crawford & Porter, Inc., advertising agency in Atlanta. These fundamentals and basic ingredients for successful local and national advertising and sales promotion programs are discussed in this article by Mr. Crawford.

* *

1. DEFINITION OF TERMS.

A. What is advertising? Advertising is selling. It uses mass communications to carry the sales messages to the greatest possible number of prospects in the shortest time at the lowest cost. Advertising moves the customer toward the product.

B. What is merchandising? Merchandising is all those activities that supplement the sales effort to move the product toward the customer.

C. What is marketing? Marketing is the integration of all the important factors concerned with selling goods at a profit. A marketing plan is one which considers all phases of the product aside from the creative work.

2. TWO BASIC DIVISIONS OF ADVERTISING.

A. National or general advertising: Advertising prepared and placed by the manufacturer or his agency to pre-sell his product for the retailer.

B. Local or retail advertising: Advertising by the dealer to produce an immediate sale.

C. General and retail advertising are mutually dependent on and strengthen each other. How they work together—

3. LOCAL OR RETAIL ADVERTISING.

A. Fundamentals of successful retail advertising remain the same for food stores, department stores or farm stores. These are the three basic ingredients for a successful advertising and sales promotion program:

1. Create interest.
2. Create enthusiasm.
3. Respect the customer.

B. Creating interest can be done by talking in terms of the customer's interest. Give honest information as to what the product will do for him. State the price and terms of sale to him. Whenever possible, dramatize your message and urge immediate action from him. Indoctrinate your sales personnel with enthusiasm about the product they are selling. Plan with imagination.

C. Creating enthusiasm: This is a positive must in successful advertising and merchandising. No program or advertising ever devised will contribute to a retail sale if it is trite or lukewarm. This is no idle theory. Smart retailers use their advertising space and inside store merchandising tools to imply "special, sale, short time only—buy now." They woo customers with simple things like plenty of free parking, free delivery, courteous attention.

D. Respect for the customer: Respect for the customer entails a great deal more than polite sales people. In essence, it means knowing the customer who is the potential buyer of your product or services. Know him well. Recognize the approach that will stimulate his particular type of person. Respect the customer's intelligence. Honesty is the best policy in advertising as in everything else. Indeed, honesty is the only policy for successful retail advertising for advertising focuses the strong white light of public scrutiny on both product and store.

And as Abraham Lincoln said, "You can fool some of the people some of the time but you can't fool all of the people all of the time." Advertising is a catalytic agent that speeds reaction between buyer and seller. It hastens the demise of a bad dealer as well as speeding the success of the good.

4. HOW TO CHECK YOUR ADVERTISING FOR MORE SELL.

A. Examine your basic plan. Every department and commodity in every store has a monthly customer buying pattern. This repeats every year with only minor variations. It tells you when your sales will peak—and when they will ebb. This buying pattern indicates when to advertise the commodity or department. Advertising which is planned and timed to take advantage of maximum sales opportunities produces more business. A good advertising plan is based on these buying patterns. It distributes the annual advertising budget by months and seasons and by departments giving each an adequate and balanced share.

B. Select the right items to advertise. Selecting the right items is critically important in implementing retail advertising's three-fold job of:

1. Creating increased traffic through the store.
2. Stepping up sales of the advertised item.
3. Building your store's reputation.

C. Things to check when writing a retail newspaper ad: The most important single factor determining how many people will read a newspaper ad is the skill and technique used in preparing it. Here are some suggestions for layout and copy. (1) Make your ads easily recognizable. Try to give your ads a consistent personality and style of their own. (2) Use a simple layout. Ads are not crossword puzzles. The layout should carry the eye easily through the message. From headline to art and copy to price to signature. Avoid too many different type faces. Use enough white space to give your copy a chance to breathe. (3) Make descriptive copy complete. Give the buyer essential information about the product you advertise. (4) State the price. (5) Use simple words. (6) Ask for the order.

D. Things to check when writing radio copy: Don't be too long winded. Use simple language. Give information that will fix and hold attention of listener. Know your announcer and if possible, write to his personality. Write an appealing and simple sales story and tell it often. Radio pays off best when used with frequency. Radio time is usually sold on 13-week cycles and that is a reasonable test period, if you wish to find out what radio can do for you. Forget long price listings when using radio. Tie your commercials as closely as possible to farm programs that have built established farm audiences. Farmers depend on radio for news, market and weather reports and information on livestock, crops, etc. For entertainment, folk, hillbilly, western and religious music ranks high. If you use live talent, you might have the entertainers appear at your store.

E. Things to check in your direct mail program: When did you last check up on the accuracy of your mailing list and have you recently expanded your list to reach new prospects? Direct mail is one of the very best ways to reach the rural audience with complete and factual information about what you have to sell. If you have a program you can keep your customer up-to-date on new developments, etc. Direct mail copy should be complete, simple and accurate. It does not have to be fancy nor expensive. A well written mimeographed sheet that gives interesting and wanted information is often as effective as a slick expensive printer's job. Take advantage and use material made available by manufacturers you represent.

Generally speaking, price alone is not so important a factor in direct mail advertising as other elements. Be sincere, be in good taste if humor is utilized. Give information.

5. HOW MUCH SHOULD YOU INVEST IN ADVERTISING?

A. This is a question you alone can answer. In your discussions with your association secretary, advertising salesman, or manufacturer's representative you often ask how much you ought to spend for advertising. There is, unfortunately, only one person who can answer that question. That person is you. Why? Because your store is different. The differences lie in your store's size, location, the length of time you have been in business, your policies and services, the kind of competition you have, the trading area you serve and the farming conditions in that area. All these factors have to be considered in determining your advertising requirements.

Generally speaking, the retail farm store is poorly merchandised and greatly under advertised. The average farm supply store carries about a dozen lines of merchandise. A recent survey indicated that in one state, the average dealer spent less than two tenths of 1% of gross sales to advertise all these items.

B. Set your budget high enough to do the job. There are some basic methods that you can use to set up a realistic advertising budget.

1. Percentage of sales: You can apply this method to either past or estimated future sales, net or gross. However, if you use this method, I recommend a percentage of your anticipated gross sales. This will automatically force you to appraise your potential sales increase realistically and to plan. Once appropriated, spend consistently and re-examine your budget every quarter to be certain you are gaining your objective.

2. The objective or task method: Using this method you merely decide in advance what objective or task you want your advertising to help you accomplish. Then determine how much you must invest to reach that goal. Either of the above methods replaces guesswork and wishful thinking with a plan of action.

3. Keep your advertising budget clean. Do not fool yourself and encumber your budget by charging to advertising items what should be charged to selling expense or general administrative expenses. Donations, association dues, entertaining customers, demonstrations and exhibits, recreational activities, sales training material, etc., are not advertising expenses and should not be so charged.

These are some of the things that should be listed as advertising investments: (a) Store and truck signs; (b) display cards and banners; (c) road signs; (d) all media costs; (e) advertising production costs, and (f) handbills and circulars, etc.

6. NATIONAL ADVERTISING.

A. Since it can be assumed that most manufacturers, if they are advertisers, have professional advice from their own agencies, I will not go too deeply into the opportunities, problems, etc., that are always part of a national or regional marketing plan.

However, as I stated previously, the primary job of manufacturer advertising is to pre-sell his product. And one of the best yardsticks any manufacturer can use in evaluating his advertising is to ask, "Will it sell at retail?" For nothing happens until something is sold.

7. TEAMWORK.

A. Like a good golf swing, the secret of most effective advertising is in the "follow through." A good advertising plan, in almost every case, is part of an over-all marketing philosophy that seeks to mesh into a smooth working team, the manufacturer's internal organization, resources and field force with those of his dealer.

8. CHECKLIST FOR EFFECTIVE NATIONAL ADVERTISING.

A. How is your follow through, Mr. Manufacturer? Are you supplying your dealer with advance information about your advertising program?

Does he get advance copies of the publications you are using? Or proofs of advertisements in advance of publication? Are you supplying your dealer with necessary material and advising him the best way to tie-in with your advertising program so that both you and the dealer can reap a miximum profit on your advertising investment?

What about: (1) Newspaper mats? (2) Radio script? (And, incidentally, through the magic of the tape recorder, it might be advantageous to have your dealers add a personal word or tag to some of your commercials.) (3) Store and truck signs. (4) In-store placards, banners, etc. (5) Printed material for use in store and as mailers. (6) A program of planned sales literature that the dealers' salesmen can use in the field.

NO HOEING—Hankins Mathews, Milton, Fla., is shown here in his field of peanuts which were not touched by a hoe this year. He estimates that chemical weed control saved him about $150. According to Mr. Mathews, his hoeing costs would have been about $5 per acre, or $250, on his 50 acres of Dixie runner peanuts. By using a chemical pre-emergence herbicide at a cost of about $2 per acre he saved $150, he says. The product, called Sesone, was applied down the rows in a band treatment at one pound per acre at peanut-planting time in April. The chemical is a product of Union Carbide Chemicals Co.

FARM SERVICE DATA

Extension Station Reports

The process is slow, but University of Tennessee plant breeders are using irradiated techniques in an attempt to overcome a problem disease that often robs cotton farmers of $1 out of $10 worth of cotton they grow. Verticillium wilt is the disease.

"The new research technique is basically that of using irradiated plant material in an organized breeding program," explain Dr. Leander F. Johnson and James M. Epps, U-T plant pathologists. "Mutations or changes in plants often occur when seed or plants are irradiated with gamma rays and neutrons. And a desirable mutation for resistance to Verticillium wilt might occur after cotton seed are exposed to atomic radiation."

The research problem is important to farmers who grow Tennessee's $115 million cotton crop. Verticillium wilt of cotton plagues upland cotton farmers in counties along the Mississippi River. "Lake County Tennessee farmers lost 10% of their cotton crops for three years," the researchers explain. "And present commercial varieties of upland cotton do not have resistance to the disease."

Deltapine 15 upland cotton seed were irradiated last spring. Plants from those seed that survived the three different strengths of radiation treatment were self-fertilized this summer in order to bring out recessive traits in the next crop. Recognized and desirable traits from these plants will be incorporated into new breeding stock and might eventually become part of a variety that is worthy of release.

The U-T scientists don't look for quick results. So far only a few plant varieties have been improved by radiation techniques, and the process took 12 to 15 years. While chances of obtaining a wilt-resistant variety of cotton by this method are small, experience with other crops justifies research along this line, the research workers believe.

★

Old alfalfa fields which were fertilized this fall by feeding them a topdressing of phosphate-potash fertilizer, got a break, according to the Middle West Soil Improvement Committee.

"Farmers who did so will be rewarded with extra tons of hay next season," says the committee, "and they may add several years to the alfalfa's life span. This can mean important savings on seeding and land fitting costs."

"Alfalfa uses up lots of phosphate and potash. So it pays to put these nutrients back in the soil to keep your fields at a high production level."

There will be less damage from winter killing when the legumes get nutrients in the fall to store up in their roots, the committee says. And when spring comes the alfalfa plants make an early, vigorous growth.

The amount and ratio of fertilizer to use depend on the soil's need for phosphate and potash. A soil test can be a guide in helping select the nutrients to add.

Some midwestern agronomists advise applying from 300 to 500 lb. per acre of a fertilizer such a 0-20-10, 0-20-20, 0-10-20 or 0-10-30, depending on the soil's need for phosphate and potash. In some areas, fertilizer mixtures that include boron are recommended.

The size of a farm should be measured in the amounts it produces, rather than in the number of acres it has. That is the statement of O. T. Coleman, University of Missouri extension soils specialist.

Mr. Coleman says farmers can increase their volume of business per acre by using lime and fertilizer to supply nutrients needed for top yields. This cuts costs of production and helps give the farmer a bigger net income per acre.

Low costs, he says, depend on high yields per acre. As yields go up, costs per unit of production tend to go down.

Mr. Coleman recommends soils tests as a guide for using fertilizer lime correctly to get profitable returns.

Accurate soil samples are the key to good results from soil tests, he says. Samples, he says, should represent the surface seven inches of each different kind of soil in a field.

Soil samples sent to the testing laboratory should be accompanied by information on all fertilizer treatments applied in recent years, Mr. Coleman advises. Including an accurate record of the soil's cropping history is valuable.

★

Dual wheat, adequately fertilized and sown early for pasture, can be grazed during the fall with little damage to prospective fields, says R. R. Mulvey, Purdue University agronomist.

Very heavy growth of fall sown wheat may have some smothering effect on the wheat itself, however. "Jointing" does not occur in the fall, Mr. Mulvey points out.

Where sown early and not grazed, Dual wheat used as a companion crop for fall sown alfalfa need not be clipped. While any variety of wheat making sufficient growth in the fall may be pastured, Dual is the only variety that can safely be sown preceding fly-free date. It is, therefore, regarded as a highly potential pasture wheat. In addition Dual ranks at the top in yielding ability under Indiana conditions, according to Mr. Mulvey.

★

E. B. Calderwood & Sons, farming near Crary, N.D., in Ramsey County, are among a number of North Dakota farmers who have applied nitrogen fertilizer this fall. They view the fall fertilization as a means of reducing field operations next spring.

The Calderwoods applied the nitrogen to fields that will be in crops the second and third years after summerfallow, according to Wayne Owen, Ramsey County extension agent.

Phosphate, which soil tests have indicated is also needed, will be applied next spring, using an attachment on the grain drill to distribute the phosphate fertilizer at seeding time. Experience on the Calderwood farm has been that when all the fertilizer required is applied at the same time it tends to slow down spring seeding operations.

With a fertilizer spreader purchased this fall, 20 tons of nitrogen fertilizer have been spread on stubble land to be cropped next year. This was done at a rate of 20 lb. per acre. An additional 10 lb. of nitrogen fertilizer per acre will be put on the same land next spring, along with phosphate, in a drill row application.

QUOTE

"Competition is a driving force in American business and few people will deny it. More price problems, business failures and ulcers are blamed on competition than anything else. Yet, as a last resort, you can't beat competition as a powerful influence in bringing about just prices, honest quality and proper service. Usually competition only forces one to do those things he should have already done. In the meantime, he has perhaps lost money or lost face, or both, to a competitor."—Sam R. Honegger, president, Honeggers' & Co., Inc.

Grant Cline Promoted By Pacific Agro Co.

SEATTLE — Pacific Agro Co. has announced the promotion of Grant Cline to the post of manager for eastern Washington, effective Nov. 1. Mr. Cline has been with the firm since its start last Jan. 1. Prior to then he was with the Charles H. Lilly Co.

Robert H. Allard, general manager of Pacific Agro, said the new position was necessary because of the increasing demand for products from the new plant at Sunnyside, Wash. and the increased activity of the company in eastern Washington.

NEW CHEMICAL PLANT

VANCOUVER, B.C.—Pennsalt Chemicals will build a $10,000,000 plant near here on the lower mainland, it was announced last week by William P. Drake, president. It has taken options on the shore of Vancouver harbor and construction will start when final land is obtained. Pennsalt recently incorporated a Canadian subsidiary, Pennsalt Chemicals Canada, Ltd.

Cowles Producing New Insect Repellent

CLEVELAND — Cowles Chemical Co., Cleveland, is now producing diethyltoluamide, the new insect repellent developed by the Army Quartermaster Research Laboratories and the U.S. Department of Agriculture earlier this year, according to Frank F. Black, manager of organic chemical sales.

He said that at present Cowles is manufacturing a product with a minimum meta isomer content of 95% shipped under the trade name Detamide 95, and that the firm later plans to offer a product of 85% meta content, to be known as Detamide 85.

Farm Pest Killers Topic at Meeting

NEW BRUNSWICK, N.J. — Agricultural chemical suppliers will hear about pest control recommendations at the annual Rutgers pesticide conference Nov. 20.

Controls, based on research and experiences of last season, will be given for weeds, insects and plant diseases, according to Dr. Leland G. Merrill, Jr., extension entomologist, who is arranging the program.

Guest speaker will be Justus Ward, chief of the pesticide regulation section of the agricultural research service, U.S. Department of Agriculture, who will explain to dealers and salesmen the significance of pesticide labeling.

Special reports from Agricultural Experiment Station researchers will deal with nematodes, post-harvest application of fungicides to fruits and vegetables and other topics.

The meeting, beginning at 9:30, will be held in the University Commons, and will be open to all dealers and salesmen, and farm and garden suppliers who handle pest killers.

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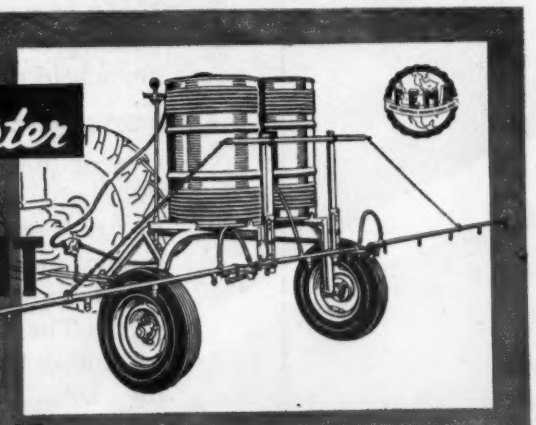

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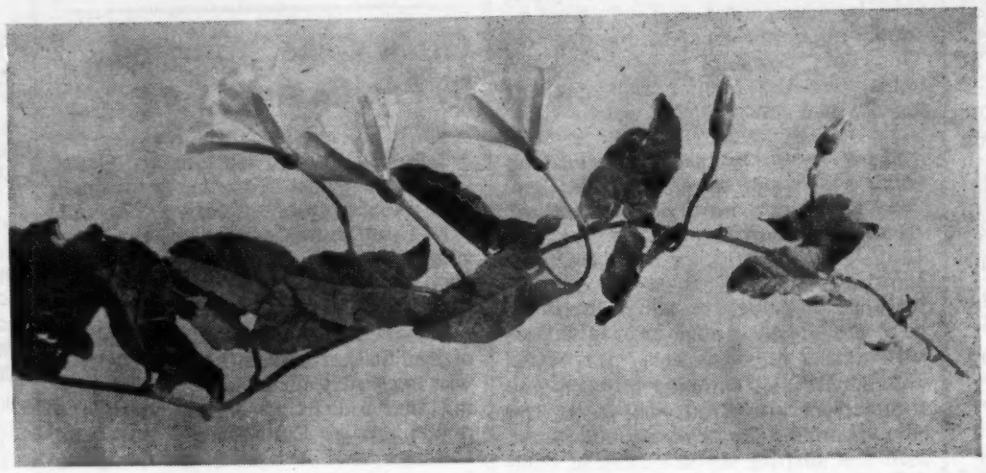
WEED OF THE WEEK



Field Bindweed

(Convolvulus arvensis)

How to Identify

This weed is also known as wild morning glory, creeping Jenny, or possession vine. It is a perennial, with slender stem, often twining around objects. Its flowers are pinkish in color.

Characteristics of Bindweed

One of the most troublesome of weeds, the bindweed has a deep and very extensive root system which makes it difficult to control by cultural means. It spreads both from seeds and from creeping lateral roots. The seeds can remain viable in soil for as long as 30 years, according to the U.S. Department of Agriculture. Thus, bindweed seed left in the soil after the original stand has been killed, is a constant potential source of reinfestation. Seedlings will continue to emerge for many years thereafter and must be destroyed before they become established as perennial plants.

Damage Done by Bindweed

Because of its prolific growth and its entanglement with economic crops, bindweed poses expensive and difficult problems at harvest time in a number of grain crops, Whereas the weed is easier to control in cultivated crops, it still robs the wanted plants of moisture and soil nutrients, and beyond that, puts growers to additional expense and effort to control the weed.

Control of Bindweed

Control by tillage and cropping requires intensive work and sometimes years of effort. (Different crop rotations are recommended in accordance with rainfall, climate and other considerations.) The USDA has suggested the use of a number of chemicals for control of bindweed. Among these is 2,4-D, application of which must be repeated for a number of successive years for complete eradication. Spraying is most effective when used in combination with intensive cultivation or in growing small grain crops, corn, and perennial grasses. Such crops, tolerant to 2,4-D, greatly increase the effectiveness of the treatment by competing with bindweed plants weakened by the chemical. If areas of bindweed total only a few square rods, application of soil sterilants may be useful. However, it must be remembered that this may cause the loss of soil productivity in the area for a number of years. Sodium chlorate can be used, but the fire hazard involved reduces the desirability, USDA says. Monuron herbicide and boron compounds are also suggested, as is common salt for sterilization.

Illustration of Field Bindweed through courtesy of U. S. Depart ment of Agriculture, Beltsville, Md.

NPFI

(Continued from page 1)

ng states: Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin.

Mr. Beers, a native of Wisconsin, eceived his bachelor of science and naster of science degrees at the Uniersity of Wisconsin. He was a stuent at River Falls State Teachers ollege (1928-1929). At the Univerity, his undergraduate work was in gronomy and agricultural journalsm, and he received his master's deree in agriculture. In 1939-40 he was ditor of the Wisconsin Country Magazine and in 1940 was public relaions chairman of the Wisconsin Litle International, student sponsored ivestock show.

From 1941 to 1947 he was Bulletin Editor, Agricultural Experiment Staion and Extension Service, Purdue University, Lafayette, Ind. At Purdue he was in charge of extension publicaions and responsible for news releases on agricultural experiment research work.

He was executive secretary of the Middle West Soil Improvement Committee for 10 years prior to being named Midwest regional director for the Institute.

MIDDLE WEST

(Continued from page 1)

E. Bennett, Omaha, Neb., president of the Middle West Soil Improvement Committee. He conducted the group's regular annual meeting in which reports were heard, then convened the assembly in a special meeting for the purpose of voting on the question of joining the National Plant Food Institute.

Mr. Bennett read to the group the resolutions which had been sent to the membership previously, in which the provisions for dissolving the Middle West Soil Improvement Committee were outlined, and statements made as to the status of the group after becoming a part of the National organization.

Under the terms of the resolutions, the MWSIC would continue to operate as an independent entity until Jan. 1, 1958, at which time it would become a regional office of the National Plant Food Institute with the latter assuming obligations for office space, salaries, and other considerations.

It was emphasized that the work projects being carried out by the Chicago group would be not only continued, but expanded, and that present personnel of the MWSIC would become employees of the NPFI. This would become effective as of Jan. 1, 1958, the resolutions stated.

Mr. Bennett opened the meeting for discussion, inviting questions from members in the audience. He stressed the fact that there was no desire on the part of the officers or members of the board of directors to "railroad" the proposition into being, and urged all members present to raise any question that might be lingering in their minds. Members of the board of directors, seated on the platform, replied to a number of queries, as did Mr. Bennett and Zenas H. Beers, executive secretary of the group

Upon announcing that a favorable two-thirds vote of the membership would be necessary to make the move, Mr. Bennett read the names of companies eligible to cast votes, then had representatives of these firms turn in their ballots to a clerk for tallying.

There was a tenseness evident throughout the meeting room as Merle Blue, Consumers Cooperative, Kansas City, Mo.; Everett Potterton, International Minerals & Chemical Corp., Chicago; and Dan Williams, Minnesota Farm Bureau, Minneapolis, tellers, went through the filled-out ballots. How would the decision go? That was the question on the minds of all present in the hushed room as the tellers continued their count.

At last, with the totals in hand, Mr. Bennett announced to the waiting audience that of 30 eligible firms present for the vote, 26 had said yes, three no, and one had not registered a choice. He declared that this constituted more than the required two-thirds vote, and the Middle West Soil Improvement Committee would now become part of the National Plant Food Institute.

The remainder of the meeting was devoted to presenting slides on the screen, showing results of work with land grant colleges in the thirteen states served by the Committee. A plan of calculating the potential yields from soils found in this area, on a state-by-state basis is being carried out at the present time, and charts are being drafted for putting the results in graphic form so fertilizer consumers in each state will have a good understanding of what soil fertility can mean to them in terms of added income.

Charles Trunkey, MWSIC assistant secretary, gave the group a view of numerous pictorial and written stories being furnished to television and radio stations for farm audiences, and Mr. Beers reported on the success this service has met in its acceptance by the press and radio.

COOPERATIVES

(Continued from page 1)

output of St. Paul Ammonia Products Co., Pine Bend, Minn.

Farmco owns fertilizer plants in Antigo, Green Bay, Prairie du Chien, Cameron, South Wayne and Whitewater. Midland is part owner of Northwest Cooperative Mills, a feed, seed and fertilizer cooperative with plants at St. Paul, Green Bay and Winona, Minn.

Midland obtains other farm and home supplies through National Cooperatives, Inc., Albert Lea, Minn. Farmco obtains its other supplies through United Co-operatives, Alliance, Ohio.

Midland was formed in 1926, while Farmco dates back to 1935.

Farmco's total sales last year amounted to $11.8 million, while Midland's volume was $43.6 million in the year ending Aug. 31. About 40% of Midland's volume was with cooperatives in Wisconsin.

TO STUDY COCKROACHES

MANHATTAN, KANSAS—Studies of cockroach differences will continue in the department of entomology at Kansas State College under a grant by the U.S. Public Health Service.

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Iowa Fertilizer Manufacturer Conference And Dealer Short Course Is Scheduled

AMES, IOWA—The program for the 10th annual fertilizer manufacturers' conference set for December 3, 1957, has been announced by Iowa State College.

Taking part in the all-day session will be speakers from the college faculty, discussing both the economic and agronomic aspects of fertilization.

Dr. W. H. Pierre, head of the department of agronomy, will preside at the morning session, and E. R. Duncan at the afternoon meeting.

D. M. Browning, associate director of the Iowa Agricultural Experiment station, will welcome the group, and the following talks are scheduled for presentation during the morning session:

"Obtaining the Most for the Fertilizer Dollar," J. T. Pesek; "Potential Fertilizer Use in the Iowa Highway Program," J. A. Stritzel; "Comparison of Fertilizer Placement Methods," E. R. Duncan, and "Super-Phosphoric Acid — Developments to Date and Future Potential," E. V. Collins.

Papers scheduled for presentation in the afternoon meeting, include the following: "Distribution and Nitrification of Anhydrous Ammonia in Soil," L. R. Frederick; "Crop Residues and Nitrogen Immobilization," J. T. Pesek; "Ammonium—Potassium —Soil Moisture Relationships," J. J. Hanway; "Relationship Between Leaf Analyses and Yield Response to Fertilizer Nutrients," L. C. Dumenil, and "Have you Evaluated the Alternatives?" J. J. Hanway.

Next day, Dec. 4, Iowa State College will hold its 10th annual fertilizer dealers' short course, with sessions scheduled for morning, afternoon and evening that day.

Dr. W. H. Pierre is to preside at the morning session, E. R. Duncan at the afternoon, and B. J. Firkins at the evening question-and-answer meeting.

The program, as announced by Iowa State College, will be as follows: Welcome of guests, Floyd Andre, dean of agriculture; "Systematic vs. Piecemeal Fertilization," J. A. Stritzel; "The Role of the Fertilizer Dealer," J. J. Hanway; "Water-Soluble Phosphorus—When and Why," J. R. Webb, and "How the New Fertilizer Law Affects You," E. R. Duncan.

The afternoon meeting has the following papers scheduled for presentation:

"Sources and Placement of Row Fertilizer for Corn," J. A. Stritzel; "Nitrogen Movement in Soils," J. T. Pesek; "Sorghum Fertilization in Iowa," F. W. Schaller; "Fertilizer Carryover, How Much?", L. C. Dumenil, and "Opportunities for the Fertilizer Dealer in Soil Sampling," G. W. Hawkins.

The evening question-and-answer period will use as panel members J. T. Pesek, J. J. Hanway, L. C. Dumenil, E. R. Duncan and J. A. Stritzel.

All sessions will be held on the Iowa State College campus.

TO PRESENT AWARD

PORTLAND, ORE.—Paul Willard, chairman of the scholarship committee of the Pacific Northwest Plant Food Association, will present the association's $100 scholarship award to David Buling, winner at Oregon State College this year. The presentation will be made Nov. 13, at a meeting of the Soils Club at the college.

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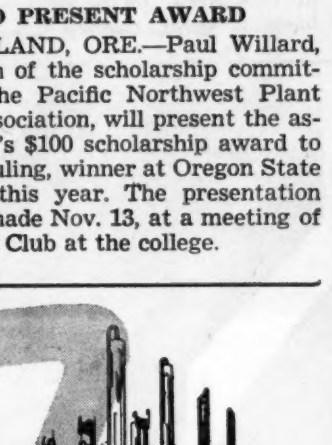

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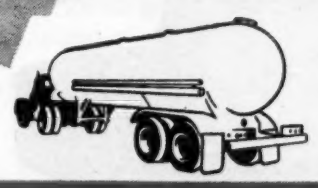

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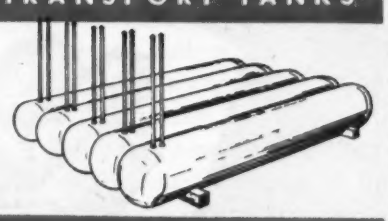

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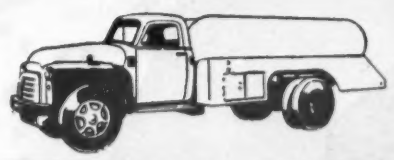

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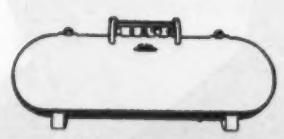
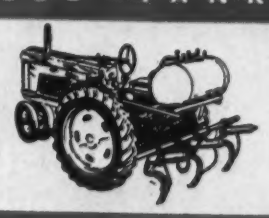


FIELD TANKS



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Shell Completes Tests On Range Fertilization

SAN FRANCISCO—Shell Chemical Corp., has made public results of five commercial-scale rangeland fertilization tests recently conducted in cooperation with the University of California agricultural extension service. The tests, of particular interest to California stockmen, showed remarkable increases of beef production per acre.

The amount of natural forage was often doubled by fertilization, and the animal carrying capacity was increased up to three-fold. Results show that investment in fertilizers and application costs on the five tests was returned one and one half to two times during one season through increased beef yield.

"The economic promise of range fertilization cannot be overemphasized," a company spokesman stated. This is especially true in California, he said, where increasing demands for beef production from dwindling acres of good rangeland present a real challenge to the western beef industry.

Tests were conducted on the Urrutia Ranch in Madera County, the Hearst Ranch at San Simeon, the Newhall Land & Farming Co. at Saugus, the Karn Ranch at Brooks and the Johnson Bros. Ranch at Orange Cove.

Areas fertilized ranged in size up to 230 acres and were fenced off to control grazing. Nitrogen, sulfur and phosphate fertilizers were applied as indicated by soil analyses. Adjacent fenced plots of comparable soil and acreage were left unfertilized to show the results of fertilization.

Close supervision was given to the number of cattle each plot could support and the total number of days the plots could be grazed. In most tests fertilization increased the grazing time two or threefold.

New Jersey Dealers to Attend Conference

NEW BRUNSWICK, N.J.—The annual pesticide dealers' conference will be held at Rutgers University Commons, New Brunswick, Nov. 20, according to an announcement by the university. Program plans call for introductory comments by J. W. Fawcett, agricultural extension leader, and a talk on pesticide labeling by Justus Ward, chief of the pesticide regulation section, plant pest control division, agricultural research service, USDA.

Moderator of the program will be C. W. McDougall, associate agricultural extension leader.

A discussion on weed control, and control of fruit crop pests, as well as other miscellaneous pests, will be on the agenda following the noon luncheon. The meeting is scheduled to adjourn at 4 p.m., according to the program.

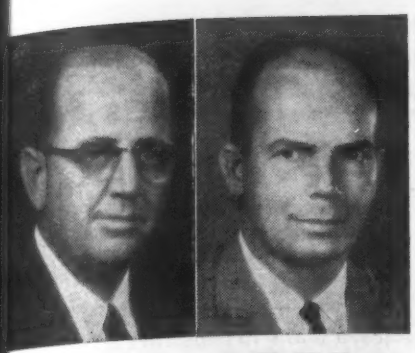
Windstorms and Rain Damage Illinois Corn

SPRINGFIELD, ILL.—Damage by wind and rain on corn in the northeastern portion of Illinois has been reported by the State-Federal crop reporting service. The severe weather conditions delayed drying of the corn crop and halted harvesting for a time.

Winds accompanying the rains blew down corn stalks in many fields, particularly in the northeastern part of the state, where earlier winds had already caused some damage, the service said.

Frosts a week ago brought the growing season to an end in most of the southern localities that had missed earlier frosts.

The service said moisture content still remains too high for safe cribbing of much of the corn crop and only about 25% of the crop has so far been harvested, compared with the average of 66% by this time.



J. I. Davis, Jr. A. H. Walters

Liquid Fertilizer Firm Names Two Officers

ALBANY, GA.—Southeastern Liquid Fertilizer Co. has named Jefferson I. Davis, Jr. as president, and A. H. Walters, vice president in charge of sales. Mr. Davis was formerly vice president and general manager, while Mr. Walters was formerly sales manager.

The new president has been with the firm since its founding in 1949. He holds degrees from both Clemson College and North Carolina University. He is active in the affairs of the Agricultural Ammonia Institute and vice president of the Georgia Anhydrous Ammonia Assn.

Mr. Walters joined the company in 1950, as plant manager at Albany, Ga. He received his college training at the University of Georgia.

The firm operates 22 plants serving Georgia, Florida, and South Carolina. Its services include not only chemicals for agriculture, but also equipment, irrigation machinery and custom application of chemicals.

Carolinas-Virginia Pesticide Formulators Announce Program

PINEHURST, N.C. — Program plans for the annual meeting of the Carolinas-Virginia Pesticide Formulators Assn. have been announced. The meeting will be held at the Carolina Hotel, Pinehurst, N. C., Nov. 18-20.

Speakers scheduled for appearance on the program of Nov. 19 are Dr. Henry Gray, Dow Chemical Co., Midland, Mich., who will talk on "Present and New Chemicals in Agriculture"; Dr. H. L. Haller, assistant to the administrator, production and research, agricultural research service, USDA, Washington, "Pesticides — Their Formulation and Use"; and Dr. Donald Ellis, head, plant pathology department at North Carolina State College, Raleigh, "New Fungicides for the Future."

Dr. Walter Mistric, cotton insect research department of North Carolina State College, will speak on "Cotton Insecticides and the Boll Weevil in North Carolina"; Rodney C. Berry, director and state chemist, department of agriculture and immigration, Richmond, Va., "Are Regulatory Laws Desirable?"

A banquet is scheduled for Tuesday night, Nov. 19, with Joseph E. Burger, St. Louis, Mo., speaking on "How to Get Better."

Wednesday's sessions include talks by Lea S. Hitchner, executive secretary of the National Agricultural Chemicals Assn., Washington, D.C., who will speak on "What An Association Can Do for Its Members"; and Dr. Clyde F. Smith, head of the entomology department of North Carolina State College, Raleigh, on "Changes in Recommendations for 1958."

Officers of the CVPFA are: J. Myron Maxwell, Maxwell Insecticide Co., Inc., Cary, N.C., president; George Simches, Planters Chemical Corp., Norfolk, Va., first vice president; John Daly, Daly-Herring Co., Kinston, N. C., second vice president; W. R. Peele, W. R. Peele Co., Inc., Raleigh, N.C., secretary-treasurer.

More Punch in Merchandising Advised at Oregon's Garden Supply Trade Exposition

PORTLAND, ORE.—A new attendance record was established by the 7th annual Northwest Garden supply trade show Oct. 29-30 when close to 1500 retailers from Oregon and scattered sections of the Pacific Coast viewed the 51 booths and participated in the educational program.

Chairman Frank Stewart, Portland, of the sponsoring Oregon Feed & Seed Dealers Assn., expressed belief that the visiting garden supply retailers stand to expand their firm's income if they put into practice the merchandising, advertising and display techniques suggested by the three experts featured during the educational program.

"Merchandising one's self is as important in volume garden supply selling as is merchandising every nook and cranny of your store," declared W. W. Marsh, Portland, of W. W. Marsh and Associates. "Most customers want to buy and it's up to you to make it easy for them to purchase what they want."

Mr. Marsh explained there is now a rapidly growing trend towards dramatizing the merchandise such as displaying new items in a wheelbarrow placed in the center of the store where everyone will bump into it.

"A retailer's advertising dollar can be spent at its best advantage with a planned program—instead of on a hit or miss basis," pointed out Willard Wilson, Portland, account executive for Cole & Weber advertising agency. "Figure out in advance what you want your advertising to do."

Mr. Wilson emphasized that most unsuccessful advertising is the direct result of laziness or inability of the advertiser to figure out what he wants to do and then plan how advertising can best help him do it.

"There is no pat formula for getting most from one's advertising dollar. This requires horse sense and realization that advertising can do some things well and some things not at all," Mr. Wilson stressed.

Practical techniques in window and floor displays were demonstrated and explained by Wilbur A. Porterfield, Portland, of Porterfield displays.

Russ Hays, Oregon Feed & Seed Dealers Assn. secretary, was show manager and was assisted by Stewart, O. Hand, Jim Russell, Dan Hogan, Jr., Frank Sorensen, Northrup Hamilton and Ralph Guynes.

COTTON MEETING PLANNED

MEMPHIS, TENN.—The National Cotton Council of America has announced that its 20th annual meeting will be held at the Westward Ho Hotel, Phoenix, Ariz. Jan. 13-14, 1958.

New from Sohio

the solution for granular fertilizers

SOHIOGEN 16

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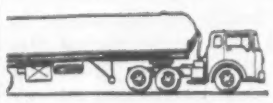

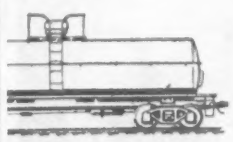

Sohiogen 16 . . . another pace-setting Sohio solution, developed by research, to match the fast changing scene in the fertilizer industry. And it's yours with a long list of benefits for granular manufacture . . .

- ★ **High fixed-to-free ratio — you can use more solution without over-ammoniation . . . require less acid neutralization.**
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- ★ **High nitrogen, low water content — reduces shipping costs, drying costs of finished goods.**
- ★ **Free-flowing, conditioned granules — result from perfectly adjusted Urea-Nitrate balance. Permits high solution usage with low moisture absorption of finished product.**

Sohiogen 16 has been tried and proved in full-scale, multi-plant manufacturing operations. Extensive tests show it can supply all of the nitrogen for granular fertilizers up to 12% — in some instances up to 15%.

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SOUTHEASTERN CONFERENCE

(Continued from page 1)

the various states and work with state agencies to get better use of soil testing services and recommendations.

2. Lend NPFI's support to help the county agricultural agent do an even better job; help create a closer relationship between fertilizer salesmen, dealers and county agents.

3. Work more closely with local credit agencies, continuing to serve as a catalyst to bring a united credit program with bankers, state colleges and local industry all participating. Farmers need encouragement to borrow money to buy fertilizers.

4. Support carefully planned demonstrations in cooperation with state colleges, preferably with county agent. Such demonstrations should capitalize on the "neighbor influence" and should favorably affect both fertilizer users and non-users.

5. Use testimonial type success stories as a basis for developing a more effective mass media program. This would be one means of reaching those farmers who do not consult with others about their fertilizer problems.

6. Continue research grant programs with state agricultural colleges, giving special attention to those projects which offer an opportunity for new fertilizer markets. A concentrated research program on forest fertilization is planned for the South.

7. Test on a research basis and in a concentrated area the techniques recommended by National Analysts to determine their effectiveness.

Dr. Coleman said that the 1954 census shows that only 70% of southern farmers are using any fertilizer and that these farmers are using an average of about one half of the amount recommended by agricultural experiment stations.

"Our staff in collaboration with others has determined the realistic potential for fertilizer usage in the South," Dr. Coleman said. "Although the state agricultural authorities recommend more, our study shows a realistic potential of 86% more fertilizer than is currently used in the Southland.

"This means that the fertilizer industry should be selling 7.8 million tons more in this area. We believe that this is not only a realistic figure but also one that can be obtained with a concerted effort on the part of our industry working with other agencies."

Dr. Coleman said that the length of time needed to obtain this increase would depend upon the effort that the industry makes. At the present rate of increase it would take about 50 years, but "we believe that this industry should set a reasonable goal for getting that amount used in the South," he said. "I am convinced that it can be done in a ten-year period."

Dr. Coleman summarized some preliminary results obtained in the South by the survey conducted by National Analysts, Inc.

He said that the study seems to show the following order of importance of those who influence the farmer in buying his fertilizer:

(a) State agricultural college personnel, especially soil testing analysts and county agricultural agents, (b) neighbors, (c) dealers, (d) others.

The most important factors which influence the farmer to buy fertilizer seem to be:

(a) Soil test recommendations, (b) reasonable credit terms, (c) demonstrations, (d) mass media, especially state and regional.

Among the 30% non-users of fertilizers the principal reasons for that non-use seem to be:

(a) Weather risks, (b) not enough money, (c) do not recognize the need.

"The National Analysts study seems to point specifically to the state agricultural colleges and the services which they render as being the most important influential factors," Dr. Coleman said. "In the light of this fact, it seems that NPFI's primary job is to create the most favorable relationship between industry and the state agricultural colleges."

He cited the program for increased fertilizer use in Georgia, developed by the state agricultural college. This program is designed to increase Georgia farm income by $200 million annually through the proper use of fertilizer.

"Despite a 10% reduction in Georgia crop acreage in 1957, more fertilizer has been used this year than in 1956," Dr. Coleman said. "This accomplishment is undoubtedly due to the efforts of industry and the college leadership."

Dr. Coleman listed several factors which, he said, made the industry not only justified, but also obligated, to sell more and more plant food so that the farmer's production cost can be cut with resulting cheaper foods for the consumer. He said that by bringing down the cost of plant foods and by helping the farmer become a more efficient producer, the fertilizer industry has made a specific contribution toward lower food bills for the housewife.

The American farmer, by increasing his efficiency, passed savings of $10 billion annually to the consumer between 1940 and 1950, Dr. Coleman said. This annual savings in 1957 is about $13 billion. In comparing these savings with the cost of operating the farm programs, including costs of surpluses, Dr. Coleman said that the fertilizer industry is obligated to continue to help the farmer increase his efficiency.

Dr. Coleman spoke after Dr. M. S. Williams, chief agricultural economist of the Institute, presented some preliminary results of the National Analysts survey. The group also heard some comments on these preliminary results by Dr. Webster Pendergrass, dean of the College of Agriculture, University of Tennessee, and Dr. H. L. Dunton, head of the department of agronomy, Virginia Polytechnic Institute.

Dr. Pendergrass said that the survey was one of the best attempts he had ever seen to get at some factors that motivate farmers. He said that the results would have broader connotations than just to fertilizer use, and would give some insight into reasons which inspire farmers to adopt various types of improved practices.

Noting that farmers appear to be demanding more reliable information, Dr. Pendergrass said that he believed a second look is in order at some of the practices now being used to gain farmer acceptance of new things. He said that much emphasis has been placed on demonstrations and that they may "be less effective than we think." However, he said that demonstrations are effective when people see them; the fault perhaps is that much time and money are spent on setting up demonstrations and too little on getting people to see them.

"We in the colleges should be very proud of what our county agents are doing in the Southeast," Dr. Pendergrass said.

Dr. Dunton commented that "I hope we don't, as we often do, make a survey and forget it."

He said that the farmer constantly is looking for more exact information and for fertilizers this means prescriptions of the kinds and amounts to use.

He suggested a program that would develop these four points:

1. The soil—a manufacturing plant for agriculture. This would call for the recognition that different soils have different capabilities.

2. Crop—the product. Different crops need different treatments in different soils.

3. Plant food—a raw material that goes into the manufacturing plant (soil) to make the product (crop).

4. The farmer—the manager.

Dr. Dunton told the group that the fertilizer dealer and agent must gain a better knowledge of the kind and analysis to use under various conditions.

"The good dealers do this," he said. "It is up to you to get the others to do it. I think they will."

John A. Miller, Price Chemical Co., Louisville, Ky., president of the National Plant Food Institute, presided at the conference, which was sponsored by the Institute.

IRRIGATION IN MARYLAND

COLLEGE PARK, MD.—About 300 Maryland farmers used irrigation systems to apply badly needed water to an estimated 17,000 acres during this summer's extended drouth, according to the results of an irrigation survey recently announced by the University of Maryland department of agricultural engineering. The survey was directed by Al Krewatch, acting head of the department. Information was collected by county agents in every county, from farmers known to be using irrigation equipment.

PARTICIPATE IN CONFERENCE—Georgia specialists who appeared on the program of the Southern Soil Fertility Conference at the Dinkler-Plaza Hotel, Atlanta, Ga. Nov. 1, discuss the events of the day. From left to right, they are: Dr. H. F. Perkins, assistant agronomist, University of Georgia; Ralph Wehunt, extension agronomist; Dr. Glenn W. Burton, chairman of the agronomy division, University of Georgia; P. J. Bergeaux, extension agronomist, and J. W. Fanning, head of the department of agricultural economics.

Hercules to Build New Facilities For Urea Manufacture

WILMINGTON, DEL. — Hercules Powder Co. has announced it will double its capacity for the production of urea at its Hercules, California plant. Two months ago Hercules disclosed plans to construct a 10,000 ton-a-year facility to make urea in solution at a new plant to be built adjacent to existing anhydrous ammonia facilities at Hercules.

In response to increased demands from agricultural and industrial users of urea, directors of the company approved expansion of the plant under construction so that it would have a capacity of 20,000 tons a year.

Using the Swiss Inventa process, Hercules will have the first plant west of the Mississippi, and the third in the nation to produce urea by this method. Completion of the expanded urea facility is expected in the fall of 1958.

The urea unit will utilize ammonia and carbon dioxide as raw materials, both available at the existing plant.

For agricultural use the plant will produce a new Hercules product, "UN-32," a urea nitrate solution. "UN-32," which has been manufactured by Hercules using ammonium nitrate made by the existing plant, is a high nitrogen content liquid.

It has no pressure, no volatile ammonia, and contains 32% nitrogen. The product is being used extensively to accelerate decomposition of crop residues, and also as a carrier for weed killers such as 2,4-D, providing plant food at the same time it destroys unwanted growth.

The product can be applied with any of the common types of spray equipment, and for large scale applications it can be sprayed from airplanes.

J. M. Martin, general manager of Hercules' Explosives Department which operates the plant, said the urea facility is part of the planned continued expansion at the Hercules plant, and a further diversification of nitrogen products which have been made there since 1932.

Insecticide Study In Kansas Continues

MANHATTAN, KANSAS — Radioactive tracers are being used by two staff members of the department of entomology at Kansas State College, Manhattan, in a study of insecticides. The project, now entering its fifth year, is sponsored by the Atomic Energy Commission.

With announcement of the fourth renewal for a one-year period came a grant of $8,300 to cover expenses. C. C. Roan and Clarence J. Terhaar will continue as project leaders. With the radioactive tracers, the scientists study particularly any potential systemic or chemotherapeutic action that might hold promise of future developments.

The same researchers also are working on an investigation of systemic insecticides to control insects attacking livestock and other domestic animals. A systemic insecticide is one that penetrates the entire system of the animal or object to be protected, and thus reaches the insect pest wherever it may attack, internally or externally. The latter study is being carried out under a grant of $9,500 from the Dow Chemical Co.

SAFETY BOOKLET

CHICAGO—The National Safety Council has published a new booklet of "Safety Slogans . . . From Everywhere, For Everyone." The booklet contains more than 1,000 slogans to fit any safety situation.

Advice on Pesticide Application Given Washington State Sprayers and Dusters

SPOKANE, WASH.—Entomolo-sts and research scientists need to ncentrate more on insect physiology keep crops insect-free.

That was the word from Dr. H. S. elford, chairman of the entomology epartment of Washington State Col-ge, when he spoke here Oct. 29 at e ninth annual Washington aerial sting and spraying conference.

"With more and more insects build-g up resistance to the dusts and rays now in use, we must concen-ate on finding out how the insect is rding himself to fight the chemi-als," Dr. Telford said.

He also said the use of "old-fash-ned" sprays such as nicotine sul-te, pyrethrum, rotenone and ryania becoming more widespread to com-at the insects which have developed esistance to other sprays.

The "old-fashioned" sprays, Dr. Tel-rd said, are primarily contact com-unds. These compounds, he said, are articularly good when insects must e controlled near harvest time, be-use of their relative lack of resi-ue. Also, Dr. Telford pointed out, hey are relatively safe on bees and ther beneficial insects.

He said one of the factors to be onsidered in using the chlorinated rays is that they often permit mite uild-ups, probably because the nat-ral enemies of the mites are de-troyed. They are effective over a arge group of insect species, he said.

"Resistance is a real problem espe-ially with spider mites" when using hosphate miticides and insecticides, Dr. Telford told the aerial spray ilots.

He said the systemic insecticides re reasonably safe to pollinating in-ects. "While primarily effective gainst sucking insects and mites, hey control a wide range of other nsects as well," he added.

In contrast to the phosphate rays, Dr. Telford said, are the non-hosphate miticides which do not of-er much of a resistance problem.

Furthermore, he said, the non-hosphate miticides are all relatively afe on man and animals. Used only gainst mites, and not insects, the miticides don't pose a bee poisoning roblem and insect parasites and redators are apparently unharmed.

"The application of herbicides in rops is one of the most rapidly grow-ng fields of crop science," T. J. Muzik, Washington State College as-ociate professor of agronomy, told he spray conference.

New herbicides are brought forth ach year, Mr. Muzik said, but some f these are of doubtful value and aution must be exercised in applying hem.

"The effectiveness of herbicides," Mr. Muzik said, "depends on many factors, such as climate, size of weed plants, quantity and uniformity of herbicide application, condition of the plants, and physical characteristics of the solution or mixture in which the herbicide is applied."

An increase in the crop dusting-spraying accident rate in Washing-ton state was reported. W. W. Jar-rell of Los Angeles, chief of the gen-eral operations bureau of the civil aeronautics administration's fourth region, made that report.

He said that in the 11 western states there have been 123 spray plane accidents so far this year, com-pared to 94 last year.

"In Washington state alone, from what I can learn from a quick com-pilation of figures," Mr. Jarrell said, "there have been 14 accidents and two fatalities this year compared to seven accidents and no fatalities in 1956."

Increasing numbers of complaints by farmers who charge their fields have been damaged with unwanted chemicals from adjacent sprayed fields are causing a serious problem, Henry Seidel, assistant state direc-tor of agriculture, said.

Mr. Seidel praised the spray pilots for their work in combatting farm pests and said that as a whole the industry was doing a good job.

"But some careless operators are making it necessary for the state to take a look at possibly tougher spray-ing and dusting laws," Mr. Seidel said. He urged the pilots to make the nonconformists get into line before the state is forced to take action.

Ag Exhibit in New York Attracts Many Viewers

NEW YORK—American Cyanamid Co. has opened an agricultural exhibit in Rockefeller Center here, featuring the contribution chemistry has made to agriculture. The exhibit is a part of the company's 50th anniversary and shows how chemicals are being used to increase farm production, conserve natural resources and improve the nation's health and living standard.

Dr. Wilbur G. Malcolm, Cyanamid president, recalls that his firm was started a half century ago to service agriculture. "Agriculture was our primary concern when the company was formed 50 years ago." He added that the first product was a nitrogen fertilizer, and that the firm continues to supply not only plant foods, but many other products for the farm, home, industry, and medicine.

Under the title, "Cyanamid Serves You on the Farm," the exhibit shows how farmers are using chemicals for soil improvement, crop defoliation, weed killing, insect and rodent control, and for improving and protecting animal health. Located on the first floor of the RCA Building in the heart of Radio City, the exhibit is expected to draw nearly one-half million visitors annually.

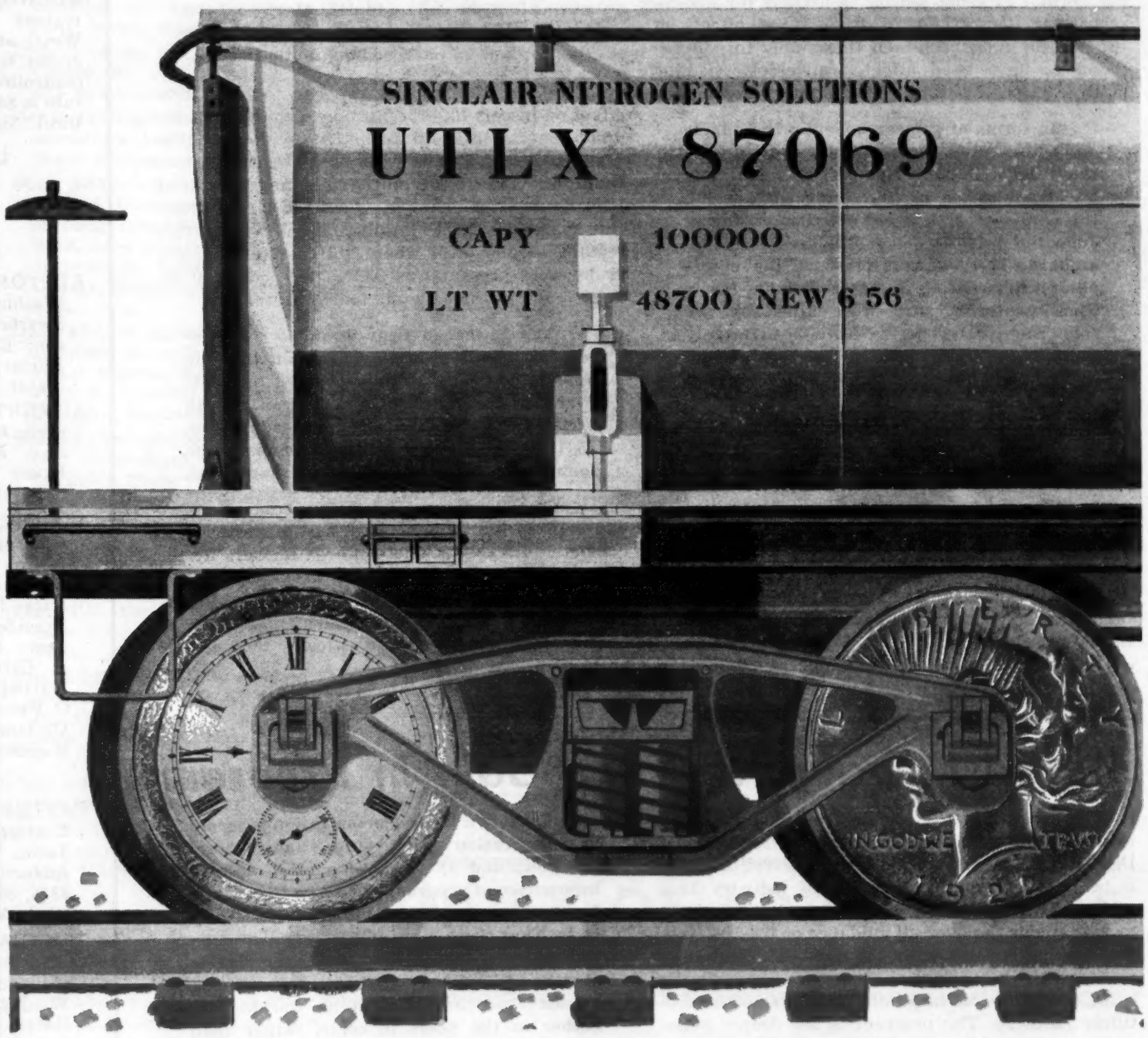
Named Assistant Director of Research

ST. LOUIS—Robert O. Nellums of St. Louis, section leader in the research department of Monsanto Chemical Company's organic chemicals division, has been promoted to the position of an assistant director of research, the company has announced.

Mr. Nellums attended Vanderbilt University where he received a B.S. degree in chemical engineering in 1942. He joined Monsanto that same year as a member of the John F. Queeny Plant laboratory group at St. Louis.

MONSANTO DIVIDEND

ST. LOUIS—The board of directors of Monsanto Chemical Co. has declared the regular quarterly dividend of 25¢ a share and a stock dividend of 2% on the company's common stock payable Dec. 16 to holders of record Nov. 25.



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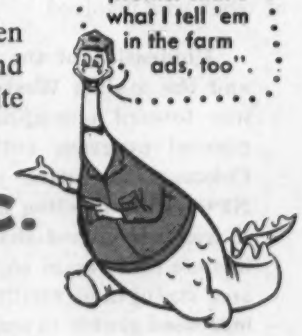

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Croplife®

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Midwestern states.

Cold Weather Fails to Control Many Insects

Does the mortality of insects through a severe winter make any significant difference in population numbers during the next summer? This question sometimes makes the pesticide trade wonder, particularly during those frigid winter months.

Dr. P. J. Chapman of the department of entomology, New York State Agricultural Experiment Station at Geneva, N.Y., has published the results of a study he has made on this subject. Using the unusually cold winter of 1956-57 and the following normal growing season as a basis for his observations, Dr. Chapman studied the effects of the cold on nine species. Of these, only three were found to have been affected adversely: codling moth, European red mite and the corn flea beetle.

"In terms of grower benefits, the effects on codling moth were probably most important," he observes. "This pest was generally less troublesome in 1957, especially during the period of first brood activity, or during June and July. Evidence obtained in Station orchards showed that most of the caterpillars hibernating on tree trunks (their usual wintering site) were killed by the cold. Survival seems to have been largely limited to those located in the ground cover," the entomologist noted.

Dr. Chapman's observations continued as follows: "A high percentage of the winter eggs of the European red mite were also killed in certain parts of the state. The pivotal temperature appears to have been around —22° F. Mortality increased rapidly below this temperature, but fell away sharply above it.

But even in districts where winter egg mortality was high, the benefit to growers was often only temporary. Typically, mite activity was low early in the season.

"The influence of winter temperatures on the incidence of bacterial wilt of sweet corn, particularly in the upper half of the Hudson Valley area, is related to the winter survival rate of the vector of the disease, a flea beetle. Since at least January temperatures were definitely colder than usual, flea beetle survival should have been low and consequently bacterial wilt of little importance. Both of these assumptions proved correct.

"Regarding the six other pests, those that winter in plant debris near or in contact with the soil apparently experienced no difficulty in surviving air temperatures of —25° F. Pests falling into this category were plum curculio (adult), Mexican bean beetle (adult), red-banded leaf roller (pupa), and, in part, codling moth (larva).

"Cold air temperatures appear to have little effect on insects like the European chafer that are inhabitants of the soil during the winter months. The reason for this is perhaps better understood when air and soil temperatures are compared. Last winter, for example, when the air temperature reached —25° F. locally, our soil temperature reading at the level where the European chafer grubs were present was 33° F., or nearly 60 degrees warmer than the air temperature.

"The European fruit lecanium overwinters as a half grown nymph and, like the apple aphid eggs, is fully exposed to whatever air temperature may prevail. In an orchard exposed to a —25° F. reading Jan. 15 the survival rate of the lecanium was found to be high, in fact higher than usual.

It might be assumed therefore, that old man winter does not emerge as a sort of pesticide to compete with the products offered farmers by the industry. The grower who sits back and expects cold weather to do away with the overwintering pests on his property will realize in the spring that he'd better invest in pesticides that can do the job!

STRONG UNITY SHOWN . . .

Midwest Group, Institute, Join in Program

The decision of the Middle West Soil Improvement Committee membership to join the National Plant Food Institute in the latter's broad program is being given wide acclaim by the industry as a whole. The combined activities of these two groups, under the over-all guidance of the Institute in Washington and with the MWSIC continuing to carry on its work with Zenas H. Beers at the helm, should result in greater benefits to the fertilizer industry. The prospect is for deeper penetration in the educational program, broader distribution of information, and an over-all acceleration of research through increased grants to universities and colleges.

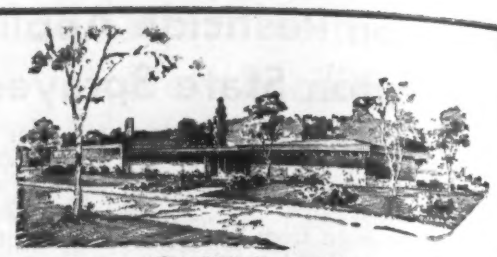
In its recent business meeting in Chicago, the Middle West group discussed the proposal at considerable length, with its board members being on hand to answer questions of members to whom some portion of the matter may not have been clear. Richard E. Bennett, MWSIC president, presented the entire proposal clearly, with Mr. Beers adding his own views, so that when the votes were taken the membership had a full understanding of what was involved.

Unification of the work of the Institute and the Middle West group will go a long way toward accomplishing the aims of the general program outlined by Dr. Russell Coleman, executive vice president of the NPFI at its meeting last June. At that time it was announced that the program would include three main objectives: 1) to broaden and strengthen fertilizer research through increased grants to universities and colleges; 2) to initiate a farm demonstration program in cooperation with state and federal agencies; and 3) to develop more specific informational programs based on the results from research and demonstrational projects. That these aims will be augmented by the presence of MWSIC in the lineup is obvious. It appears fortunate for all concerned that the two will be working together in the years to come, rather than having duplication of efforts with neither group being able to reach its full potential alone.

Projects carried out by the Middle West group during the past seasons have been directly along the lines enunciated by NPFI as being worthy of continuation and expansion in the thirteen states served by the Middle West committee. This work will now be enhanced.

Not only in the Middle West is progress being made by the Institute in getting its program under way. Regional directors have been selected for the southwest, southeast, west, and northeast, and the decision of Mr. Beers' group to cast their lot with the Institute brings that portion of the program much nearer completion.

It remains, of course, for the Institute to get the new program into being, but steps are being taken right now which should result in action without undue delay. Having assembled a first class team for the job, the Institute has the eyes of the industry on it to observe the plan's getting under way. There is a big job to be done, but the industry is confident that the end results will be more than worthwhile.



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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is $5 for one year ($8 a year outside the U.S.). Single copy price, 25¢.

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DONALD NETH
Managing Editor

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MEETING MEMOS

Dec. 18-19—Shell Nematology Workshop, Drayton Hall, University of South Carolina, Columbia, S.C.

1958

Jan. 22-23—Northwest Agricultural Chemicals Industry conference, Hotel Benson, Portland, Ore. (In connection with N.W. Vegetable Insect Conference and Western Cooperative Spray Project.)

EDITOR'S NOTE — The listings above are appearing in this column for the first time this week.

Nov. 12-13—Thirteenth Annual Wyoming Weed and Pest Control Conference, Cody Auditorium, Cody, Wyo.

Nov. 13-15—National Aviation Trades Assn., Annual Convention, Hotel Adolphus, Dallas, Texas.

Nov. 14-15 — Sixth Annual Oregon Weed Conference, Withycombe Hall, Oregon State College, Corvallis, Ore., Rex Warren, Corvallis, Ore., Secretary.

Nov. 17-19—National Fertilizer Solutions Assn., Annual Convention, Netherland-Hilton Hotel, Cincinnati, Muriel F. Collie, 2217 Tribune Tower, Chicago 11, Ill.

Nov. 18-20—Carolinas-Virginia Pesticide Formulators Assn., Carolina Hotel, Pinehurst, N.C. W. R. Peele, 516 S. Salisbury, Raleigh, N.C., secretary.

Nov. 18-22—International Conference on Citrus Virus Diseases, University of California, Riverside Campus.

Nov. 18-22—American Society of Agronomy, Annual Meeting, Atlanta Biltmore Hotel, Atlanta, Ga.

Nov. 20—Annual Rutgers Pesticide Conference, University Commons, New Brunswick, N.J.

Nov. 20-21—Ohio Pesticide Institute, Annual Winter Meeting, Neil House, Columbus, Ohio, J. D. Wilson, Ohio Agricultural Experiment Station, Wooster, Ohio, Secretary.

Nov. 21—New Jersey Entomological Society, Fall Meeting, New Brunswick, N.J.

Nov. 21-22—Seventh Annual Arkansas Fertilizer School, Marion Hotel, Little Rock, Ark.

Nov. 25—Oklahoma Fertilizer Dealers Conference, Oklahoma State University, Stillwater, Okla.

Nov. 25-26—Entomological Society of America, Eastern Branch Meeting, Commodore Hotel, New York, B. F. Driggers, New Jersey Agricultural Experiment Station, New Brunswick, N.J., Branch Secretary.

Nov. 26—Oklahoma Soils and Crops Conference, Oklahoma State University, Stillwater, Okla.

Nov. 26 — Manufacturing Chemists Assn., 7th Semi-Annual Meeting and Winter Conference, Hotel Statler, New York.

Dec. 1-3—Southern Seedsmen's Assn., Jung Hotel, New Orleans.

Dec. 2-3—Plant Food Producers of Eastern Canada, Seaway Hotel, Toronto, Canada.

Dec. 2-5—Entomological Society of America, 5th Annual Meeting, Hotel Peabody, Memphis, Tenn., R. H. Nelson, 1530 P St., N.W., Washington 5, D.C., Executive Secretary.

Dec. 2-5—Cotton States Branch, Entomological Society of America, 32nd Annual Meeting, Hotel Peabody, Memphis, Tenn., M. E. Merkl, Box 202, Leland, Miss., Secretary-Treasurer.

Dec. 2-6—Exposition of Chemical Industries, New York Coliseum.

Dec. 3-4—Iowa State College Fertilizer Manufacturer's Conference and Fertilizer Dealers' Short Course, Memorial Union, Iowa State College campus, Ames, Ia.

Dec. 4-5—Twelfth Annual Hybrid Corn Industry-Research Conference, La Salle Hotel, Chicago, Ill.

Dec. 4-6—Soil Science Society of Florida, Annual Meeting, Fertilizer Symposium on Dec. 5, University of Florida, Gainesville.

Dec. 5—Second Annual New Mexico Irrigation Exposition, Eastern New Mexico Fairgrounds, Roswell, N.M.; Al W. Woodburn and William Harr, c/o Southwest Public Service Co., Roswell, co-chairmen.

Dec. 6—Eighth Annual Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Dec. 8-12—Vegetable Growers Association of America convention, Jung Hotel, New Orleans, La.

Dec. 9—Soils and Fertilizer Short Course, St. Paul Campus, University of Minnesota.

Dec. 9-12—Chemical Specialties Manufacturers Assn., Hollywood Beach Hotel, Hollywood, Fla.

Dec. 10-12 — North Central Weed Control Conference, 14th Annual Meeting, Hotel Savory, Des Moines, Iowa. Lyle A. Derscheid, agronomy department, South Dakota State College, Brookings, Program Chairman.

Dec. 11-13 — Agricultural Ammonia Institute, Seventh Annual Meeting, Hotel Marion, Little Rock, Ark., Jack F. Criswell, Claridge Hotel, Memphis, Executive Vice President.

Dec. 12-13—Beltwide Cotton Production Conference, Hotel Peabody, Memphis, Tenn.

Dec. 19-20—Missouri Soil Fertility Short Course, University of Missouri, Columbia, Mo.

1958

Jan. 7-8—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 8-10—Northeastern Weed Control Conference, Hotel New Yorker, New York, R. J. Aldrich, Rutgers University, New Brunswick, N.J., Secretary.

Jan. 9-10—Mississippi Insect Control Conference, State College, Miss.

Jan. 13-14—National Cotton Council of America, twentieth annual meeting, Westward Ho Hotel, Phoenix, Ariz.

Jan. 13-15, 1958—Weed Society of America and Southern Weed Conference, joint meeting, Peabody Hotel, Memphis, Tenn.

Jan. 14-15—Georgia Plant Food Educational Society, Annual Meeting, University of Georgia, Athens, Ga., Fielding Reed, 710 Mortgage Guarantee Bldg., Atlanta, Ga., Secretary-Treasurer.

Jan. 14-16—Nebraska Fertilizer, Machinery and Chemical Exposition, Sponsored by the Nebraska Fertilizer Institute with the Nebraska College of Agriculture, Pershing Auditorium, Lincoln, Neb.

Jan. 20-21—Pest-O-Rama, sponsored by the Alabama Association for Control of Economic Pests, Coliseum, Montgomery, Ala., W. G. Eden, P.O. Box 626, Montgomery, Ala., Secretary-Treasurer.

Jan. 21-22—North Carolina Pesticide School, College Union Bldg., North Carolina State College, Raleigh.

Jan. 21-23—California Weed Conference, San Jose, Cal.

Jan. 22—Oregon Fertilizer Dealers Day, Oregon State College, Corvallis, Ore.

Jan. 23-24—Illinois Custom Spray Operators School, University of Illinois, Urbana, Ill.

Jan. 30-31—Colorado Agricultural Chemicals Assn., Annual Meeting, Cosmopolitan Hotel, Denver.

Feb. 4-6—North Carolina Pest Control Operators' Short Course, College Union, Raleigh, N.C. Clyde F. Smith, Dept. of Entomology, N.C. State College, secretary.

Feb. 13-14—Agronomists-Industry Joint Meeting, Edgewater Beach Hotel, Chicago, sponsored by the Middle West Soil Improvement Committee, Z. H. Beers, 228 N. LaSalle St., Chicago 1, Ill., Executive Secretary.

Feb. 20-22—Nitrogen Conference, University of Minnesota, St. Paul. M. W. Mawhinney, Smith-Douglass Co., Albert Lea, Minn., Chairman.

March 4-5—Western Cotton Production Conference, Hotel Cortez, El Paso, Texas, Conference Sponsored by the National Cotton Council and the Five State Cotton Growers Assn.

June 9-11—Association of Southern Feed & Fertilizer Control Officials, Heart of Atlanta Motel, Atlanta, Ga., Bruce Poundstone, University of Kentucky, Lexington, Ky., Secretary-Treasurer.

June 15-18—National Plant Food Institute, Annual Meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 25-27—Pacific Branch, Entomological Society of America, San Diego, Cal.

July 18-19—Southwest Fertilizer Conference and Grade Hearing, Buccaneer Hotel, Galveston, Texas.

Freeze Damage Tallied In Oregon Fruit Area

MILTON-FREEWATER, ORE.—Earl Brown, Umatilla County agent here, recently compiled figures following a survey of growers and nurserymen to get a better picture as to what has happened since the severe 1955-56 winter freeze.

He reports that an estimated 1,881 acres of trees survived the freeze or have been replanted since. Another 1,500 acres of land suitable for fruit growing only remain to be planted. This accounts for a total of 3,400 acres of tree fruit acres compared to 4,500 acres in orchards before the freeze.

Mr. Brown said that no cherry or peach trees survived the freezes, but that some 10,000 prune trees did and 3,630 new prune trees have been planted. An estimated 800 Milton-Freewater district plum trees also survived the cold weather and another 5,158 have been planted.

There was a total of 44,650 trees of all fruit varieties surviving the freeze, Mr. Brown said. Some 106,883 more trees were planted this year than in 1956 to make for a total of 151,483 trees on 1,881 acres.

There were 4,550 acres of fruit trees in the Milton-Freewater district before the freeze with 2,500 acres planted to prunes and plums, 1,500 acres to apples, 300 acres to cherries and 250 acres to peaches.

JOINS MICHIGAN CHEMICAL

SAINT LOUIS, MICH.—Dr. J. R. Gump has joined Michigan Chemical Corp. here as group leader in charge of inorganic research. Announcement of his appointment was made by Dr. Dwight Williams, director of research. Dr. Gump was recently with Heavy Minerals Co. as senior research chemist. He obtained his doctorate in chemistry at the University of Kentucky in 1952 following which he was assistant professor of chemistry at the University of Cincinnati.

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